APPENDIX C

GEOLOGIC, HYDROGEOLOGIC AND GEOTECHNICAL INVESTIGATIONS REPORT

GEOLOGIC, HYDROGEOLOGIC AND GEOTECHNICAL INVESTIGATIONS REPORT

PROPOSED GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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PREFACE

This report was prepared at the request of the Regional Water Quality Control Board - San Diego Region (RWQCB) to address the elements of the proposed Gregory Canyon Landfill (GCLF) project. It was developed through discussions with, and in response to comments received from the RWQCB with regard to the project Joint Technical Document, which was originally submitted in January 2001. This report incorporates technical data, and provides the analyses and conclusions for the project and incorporated the data from more than six phases of geologic and hydrogeologic characterization.

Initial site characterization was completed by Geotechnical Consultants, Inc. (GCI) for the County of San Diego and the U.S. Department of Interior (GCI, 1989). The second and third phases were completed by Geraghty and Miller (G&M, 1988, 1990). The fourth phase included the work of Woodward-Clyde Consultants completed in 1991 and reported in 1995 (WCC, 1995). The fifth phase included a hydrogeologic study completed by GeoLogic Associates (GLA, 1997), and the sixth phase addressed geotechnical issues (GLA, 1998 and 1999). In support of the EIR for the GCLF project, or in response to comments received on the draft EIR, GLA has also completed additional supplemental studies and reports. The major project reports are provided below.

1. Geotechnical Consultants, 1989, Preliminary assessment of geologic and hydrogeologic conditions, Gregory Canyon site: Draft Environmental Impact Report, Environmental Impact Statement for the North County Class III Landfill, San Diego County, California.

2. Geraghty & Miller, 1988, Phase I hydrogeologic investigation - Proposed North County Landfill, San Diego, California: Consultant's report to Waste Management of North America, Western Region.

3. Geraghty & Miller, 1990, Phase II investigation - Proposed Gregory Canyon Class III Landfill, San Diego County, California: Consultant's report to Waste Management of North America, Western Region.

4. Woodward-Clyde, 1995, Geology and hydrogeology report, Gregory Canyon Landfill, Pala, San Diego County, California: Consultant's report to Gregory Canyon Ltd. (March, 1995).

5. GeoLogic Associates, 1997, Phase 5 - Hydrogeologic investigation for the Gregory Canyon proposed landfill site: Consultant's report to Gregory Canyon Ltd.

6. GeoLogic Associates, 1998, Phase 6 - Geotechnical Investigation for the Gregory Canyon proposed landfill site: Consultant's report to Gregory Canyon Ltd.

7. GeoLogic Associates, 1998, Geophysical Study of Potential Borrow Areas, Proposed Gregory Canyon Landfill, September.

8. GeoLogic Associates, 1998, Leachate Generation Analysis, Proposed Gregory Canyon Landfill, December.

9. GeoLogic Associates, 1999, Technical Memorandum, Geology and Soils, Proposed Gregory Canyon Landfill, November.

10. GeoLogic Associates, 2001, Phase 5 Supplemental Investigation, Results of Pumping Tests, January.

11. GeoLogic Associates, 2001, Addendum to Geotechnical Investigation of the Proposed Access Road and Bridge over San Luis Rey River, April.

12. GeoLogic Associates, 2001, Addendum, Settlement Analyses, Proposed Gregory Canyon Landfill, September.

13. GeoLogic Associates, 2001, Addendum, Leachate Generation Analysis, Proposed Gregory Canyon Landfill, September.

During the course of the investigations completed by GLA, consideration was given to the prescriptive standard design as well as an engineered alternative that would maximize the capacity of the site. As initially designed, the engineered alternative placed the base of the landfill within fractured bedrock below the piezometric surface. The geotechnical investigation (References 5, 6, 9 and 10) addressed the engineered alternative and its design was included in the EIR as the preferred option for the proposed project.

In February 2001, following submittal of the Joint Technical Document (Bryan A. Stirrat & Associates, January 2001), and further discussions with the RWQCB and local enforcement agency (LEA), Gregory Canyon Ltd. (GCL) determined that the prescriptive standard design configuration would be required to move the project forward. In this design configuration, the landfill base grade is above the piezometric surface.

A revised Joint Technical Document was prepared to address the prescriptive standard design in July 2001 (BAS, 2001). In August 2001, following additional discussions with the RWQCB and LEA, GCL agreed to further revise the proposed landfill by incorporating a double composite liner system to provide additional assurance of the long-term protection of groundwater and surface water in the vicinity of the site. In March 2004, following further discussions with the RWQCB, the liner design was enhanced to encapsulate the geocomposite clay liner layer (e.g., the geocomposite clay liner is sandwiched between an upper 80-mil high density polyethylene [HDPE] geomembrane and a lower 60-mil HDPE geomembrane) overlying a drainage layer consisting of a minimum nine-inch thick gravel or equivalent material placed on a 60-mil HDPE liner. As shown on Figure 3-2, these additional layers rest on the existing two-foot thick low-permeability soil layer.

This Geologic, Hydrogeologic and Geotechnical Investigations Report has been prepared at the request of the RWQCB to provide the results of the technical evaluations completed for the project with analyses and conclusions specific to the proposed prescriptive design alternative including the construction of a composite liner system.

The pertinent information in this project-specific document is divided into three chapters. Chapter 1 provides the geologic information for the Gregory Canyon project site, Chapter 2 describes the hydrogeologic conditions of the site and region, and provides the basis for a proposed monitoring and reporting program for the GCLF, and Chapter 3 provides the results of geotechnical analyses conducted in support of the proposed project.

SECTION 1.0

GEOLOGY

1.0 GEOLOGY

This section presents a compilation of geologic data obtained during various investigative phases conducted for construction and operation of a Class III solid waste landfill on the Gregory Canyon property (the Gregory Canyon Landfill).

1.1 INTRODUCTION

The main objectives of the geologic phase of the investigation were to define the site setting and geologic units, review the seismic setting of the site, and evaluate potential geologic hazards associated with siting a landfill in Gregory Canyon. This information provides the basis for the landfill design and construction as discussed later.

Location and Topography

The site is located in the central portion of the Peninsular Ranges province, which is characterized by northwesterly trending mountains and intervening valleys. This geomorphic province extends from the Los Angeles Basin into Baja California, Mexico. Major drainage systems generally traverse the province in a westerly direction and in northern San Diego County include, from north to south, the Santa Margarita, San Luis Rey and San Dieguito rivers. The proposed landfill site is located in Gregory Canyon, a north-draining tributary canyon south of the tributary to San Luis Rey River valley.

For the last 20 million years, the tectonic "grain" of the Peninsular Ranges province has been dominated by strike-slip faulting along northwest-trending faults like the San Andreas, San Jacinto, Elsinore, and Rose Canyon faults. The Elsinore fault zone is located about six miles northeast of Gregory Canyon, and is thus the closest of these large structural discontinuities to the site (Figure 1-1). Like the rest of these faults, the Elsinore fault zone is the result of the right-lateral slip between the North American and Pacific plates, though individual fault strands within the Elsinore fault zone may have strike-slip, normal or thrust fault motions due to complex local fault geometries (Lamar and Rockwell, 1986). The northwest-trending fabric of the fault zone results in distinctive structural features, including large-scale structural depressions like the Elsinore Trough, and structural highs such as the Agua Tibia Mountains.

Regional topography in the Peninsular Range is characterized by considerable relief with relatively moderate to steep slopes. Most of the area is undergoing erosion and mass wasting, but the major river valleys have thick accumulations of sediments, technically referred to as alluvium. The alluvium undergoes cycles of deposition and erosion, depending on the water flow in the drainage system. Typically, the rivers are at low flows during the summer months and have variable flows during the winter rainy season.

The proposed landfill site is located in Gregory Canyon, a north-draining tributary canyon to the San Luis Rey River valley (Figure 1-1). The thalweg of the canyon drops in elevation from about 920 feet amsl at the head of the canyon on the south, to about 320 ft amsl on its northern terminus. East of the Gregory Canyon, Gregory Mountain rises

steeply to a maximum elevation of 1844 feet above mean sea level (amsl). The western ridge is less steep, and rises to a maximum elevation of only 940 feet amsl.

Gregory Canyon side slopes are about 5:1 (horizontal:vertical) near the canyon thalweg, become 2:1 at the east edge of the proposed landfill footprint, and are often 1:1 or steeper on the upper part of the eastern slope above the site. The western flank of the canyon is defined by a rounded ridge line, with rather uniform slopes at inclinations of 2:1 to 3:1.

1.2 GEOLOGIC UNITS

The following sections summarize the regional and local geologic units based on a review of literature and site mapping performed at the site, and as presented previously in the Phase 6 Geotechnical Investigation (GLA, 1998).

1.2.1 Regional Stratigraphy

Pre-batholithic, metasedimentary and metavolcanic rocks outcrop throughout the Peninsular Ranges. In San Diego County, outcrops include the Triassic/Jurassic Bedford Canyon sedimentary sequence and the overlying Jurassic Santiago Peak volcanics.

Late Cretaceous sedimentary rocks in the Camp Pendleton area include the largely non-marine Trabuco Formation, and the marine Williams Formation, which in the San Luis Rey and Encinitas areas, are grouped in the Lusardi and Point Loma Formations. Cretaceous rocks are not exposed in the immediate vicinity of the project site.

Post-Cretaceous rocks lie unconformably (i.e., younger strata were deposited after a period of erosion) on either the Cretaceous rocks or the crystalline basement, but are largely confined to coastal margins some distance from the project site.

In many instances, the crystalline rocks are covered by residual soils, or colluvial, and alluvial deposits. The colluvial deposits are typically located along the base of slopes and are formed as a result of the downslope movement of soil and rock by the force of gravity. The alluvial deposits are found to some degree in most drainages, with deposits of considerable thickness present in the major river valleys.

1.2.2 Site Stratigraphy

Several geologic units occur within the project site (Plate 1). In the lower portions of Gregory Canyon, a thin veneer of unconsolidated residual soils, colluvial, and alluvial deposits mantles a substrate of weathered tonalite. The topographic highs bounding the canyon are formed by igneous intrusive and metamorphic rocks with varying degrees of weathering. The following subsections describe in detail the geologic units that are exposed at the site.

Surficial Soils

According to Woodward-Clyde (1995), the topsoil units encountered in the area vary in thickness from about six inches to three feet, and are composed of silty sand, silty sand with clay, and silty sand with cobbles and boulders. In general, it is expected that the steeper, upper slope area of the landfill site include slightly thinner soil accumulations than the intermediate or lower slope areas. Underlying the topsoil are residual soil horizons or weathered bedrock.

Alluvium

Two alluvial units have been mapped at the lower elevations near the mouth of Gregory Canyon. The younger unit, Qal-1 is formed by overbank deposits from the active San Luis Rey river channel, which are interbedded with channel deposits from the Gregory Canyon drainage. These deposits are relatively thin and contain gravels, cobbles and boulders, supported by a sandy silt matrix. The older alluvial subunit, Qal-2, is a terrace remnant of older alluvium from the Gregory Canyon drainage.

The alluvial wedge pinches out to the south, before reaching the footprint of the proposed landfill development. The wedge thickens to the north until eventually it merges with the channel deposits of the San Luis Rey River. Well GMW-2, near the mouth of the canyon, encountered a 50-foot section of alluvial deposits before reaching the underlying bedrock.

Colluvium

Colluvium forms a veneer over most of the surface of the proposed landfill site. In most instances it consists of silty sand with rock clasts that range in size from gravel to very large boulders. Finer-grained deposits, largely devoid of rock clasts, were encountered in test pits located at the southern end of the canyon (Figure 1-2). Older colluvium was also encountered in some of the test pits, and consisted of clayey sand to sandy clay with varying rock content and slight to moderate cementation.

Rock clasts exposed at the surface of the colluvial veneer vary from gravel- to boulder-size material. Boulders of leucogranodiorite, some in excess of 20 feet in maximum dimension, are present along much of the eastern sideslopes. Based on borings drilled during previous investigations, it appears that boulders are extensive in the subsurface (Attachment 1).

The thickness of the colluvial deposits in the landfill site area is highly variable. Cross-section interpretations by Geraghty & Miller (1990) show thickness variations from 2 to 50 feet. The upper slope area is likely to be underlain by thin colluvial deposits and surficial soils formed on highly weathered crystalline rock. Debris chutes and drainage channels may be locally backfilled with colluvium of moderate thickness, but in general, the upper slopes are not likely to be underlain by thick, laterally continuous deposits of

colluvium. Lower slope areas are expected to be underlain by much deeper and laterally extensive colluvial deposits consisting of a matrix of silty sand and clay around larger cobbles and boulders.

The current grading plan calls for removal of surficial soil and colluvium over the entire footprint of the landfill.

Bedrock

Larsen (1948) used the term Bonsall Tonalite to describe the rocks underlying the western ridge adjacent to Gregory Canyon, and the term Indian Mountain Leucogranodiorite to describe the light-colored, bold outcrops of granitic rock underlying the eastern ridge of the site area. Larsen (1948) also mapped an intervening band of metamorphic rock along the lower slopes of the eastern ridge, which he correlated with the sedimentary Triassic/Jurassic Bedford Canyon Formation; rocks of this unit have relict volcanic textures, however, and are probably best correlated with the Jurassic Santiago Peak volcanics.

The contacts between all three units are intrusive, albeit different in nature. The main body of the leucogranodiorite is in intrusive contact with the metamorphic band of rocks midway along the easterly slope of Gregory Canyon. The contact zone is narrow and abrupt where it can be observed, and has the characteristic features of sharp intrusive contact,-with apophyses[1] and dikes[2] extending from the leucogranodiorite into the metamorphic rock. No evidence of shearing is observed in outcrop.

The intrusive contact between the tonalite and the metamorphic wedge is somewhat transitional because of the effects of partial melting. Mafic or intermediate magmas (gabbro to tonalite) are emplaced at a relatively high temperature (1,200° to 900° C), so the contacts between them and the host rock tend to be anatectic (i.e., they are accompanied by partial melting of the pre-existing rock). The pre-metamorphic rock fabric can be completely obliterated by migmatization (i.e., development of a banded aspect in the rock as a result of partial melting), so along the contact zone it is not always easy to discriminate between the intrusion and the host rock. The intrusive nature of the contact has been documented at several field locations, however, and is characteristically irregular and intricate. No evidence of shearing is observed in the outcrop and the contact lacks the planar expression expected of a shear zone.

In response to comments received on the draft EIR, GLA prepared a technical memorandum (GLA, 1999) to clarify several issues, including the nature of the metamorphic/igneous rock contact. The following section summarizes the discussion from this technical memorandum, including photographs taken of these contacts provided in Attachment 2. Attachment 2 includes a series of photographs to illustrate the contacts

[1] Apophysis is defined as a branch from a vein or fracture that has been filled by the injection of a larger intrusive body.
[2] Dike is a tabular body of intrusive magma that cuts across the massive rocks.

of the metamorphic rocks with the leucogranodiorite (on the east) and with the tonalite (on the west). In this attachment, the location of each photograph is indicated on Figure 1.

Attachment 2, Figure 2 shows a sharp intrusive contact without evidence of shearing, and an apophysis of the leucogranodiorite "poking" through the amphibolite that forms the metamorphic wedge. Figure 3 shows a sharp but irregular contact, with a pegmatitic dike extending from the leucogranodiorite into a projection of the amphibolite. Figure 4 shows another sharp but irregular contact, with pegmatitic dikes extending into the metamorphic rock. In this photograph the presence of bold outcrops of leucogranodiorite is noted beyond the contact.

The intrusive contact between the tonalite and the metamorphic wedge is shown in Attachment 2, Figures 5 through 7. However, both rocks are very similar in color, so the photographs are not as striking as those described in the previous paragraph. In Attachment 2, Figure 5 shows an irregular intrusive contact, with a "relief" of about 3 feet. Attachment 2, Figure 6 shows a close-up of this contact, which is characteristically irregular and intricate. Attachment 2, Figure 7 shows a different contact between the tonalite and the metamorphic rocks, this time with a "relief" of about 6 feet. The photographs (Attachment 2, Figures 2 through 7) indicate that the contacts between the units are not faults.

Metamorphic rocks (TJm). The metamorphic rocks present along the easterly slopes of Gregory Canyon form a north-south-trending belt of older rock that was intruded by batholithic rocks (Plate 1). Specifically, the tonalite intruded and intermingled with the metamorphic rock, and both units were subsequently intruded by the leucogranodiorite.

The metamorphic rocks include amphibolites and metavolcanic rocks that locally exhibit some migmatitic[3] structure that resembles gneissic banding. The rocks are generally dark blueish gray, hard, and only slightly weathered with aphanitic to porphyroblastic[4] textures. Relict porphyritic textures suggest a volcanic protolith[5] for some of the units.

As indicated above, Larsen (1948) correlated these metamorphic rocks with the Bedford Canyon Formation (a sequence of mildly metamorphosed sedimentary rocks represented by deformed slates, schists, quartzites and localized occurrences of limestone), which is widespread in the Santa Ana Mountains. At Gregory Canyon, however, there are no outcrops of slates, quartzites or marbles, and there is a preponderance of metavolcanic

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[3] Migmatitic texture is the name given to alternating dark and light colored bands in a metamorphic rock. The bands are formed in response to partial melting of the rock as it came in contact with magma. In contrast, gneissic banding is formed by segregation of dark and light colored minerals in the absence of partial melting or mixing with a magma. The dark and light bands in these two cases may look alike, but one forms only adjacent to a magma intrusion, whereas the other may be found over a large area.

[4] A rock is said to have aphanitic texture when the crystals that form it are too small to be observed by the naked eye. In contrast, the term porphyroblastic texture is applied to metamorphic rocks when a few large crystals, easily recognized by the naked eye, are set in a finely crystalline matrix. The same kind of texture in a volcanic rock is called porphyritic.

[5] A protolith is a parent rock from which a given metamorphic rock was formed by metamorphism.

rocks. It seems more reasonable to correlate the Gregory Canyon sequence with the Jurassic Santiago Peak volcanics, a unit composed of metavolcanic and metasedimentary rocks exposed elsewhere in San Diego County.

Of the 196 acres of the proposed landfill footprint, approximately 12 acres along the eastern side encroach over the outcrop of metamorphic rocks.

Tonalite (Kt). The tonalite that underlies the western slopes and the central portion of the Gregory Canyon area is an extensive rock unit in the area (Plate 1). Larsen (1948) referred to this rock unit as the Bonsall Tonalite. The tonalite is a dark gray rock, with medium to coarse crystallinity that includes a variety of related rock types such as gabbro. Other common variations noted in the tonalite are the locally veined and streaked appearance and the migmatitic fabric that is observed near the contact with the metamorphic rocks. The rock is also characterized by rare inclusions of the metamorphic rocks, and by numerous leucogranodiorite dikes that include fine-grained aplites[6] and coarse-grained pegmatites.

The tonalite is moderately to intensely weathered in most outcrops, although small cores of only slightly weathered tonalite form boulder knobs in the western flank of Gregory Canyon. Moderately weathered tonalite still preserves its phaneritic texture, but the weathered rock is less cohesive than the pristine rock, and the constituent minerals are slightly altered to oxides and clays, particularly along the edges. The intensely weathered tonalite has a granular texture that only vaguely recalls the original phaneritic texture, and is oxidized throughout. The constituent minerals are partially altered to oxides and clays, and disaggregate easily under pressure. Depth of weathering, as determined from exploratory drilling by Geraghty & Miller (1990), ranges between 65 feet (GMP-3) and 95 feet (GMW-2) (Attachment 1).

The tonalite comes in contact with the metamorphic rock along the easterly side slopes of Gregory Canyon, although the contact is typically covered by colluvium or obscured by surficial soils. Based on its map position, as inferred from isolated outcrops of both rock types, the contact appears to dip to the east at angles of 20° to 25°.

Leucogranodiorite (Klgd). The leucogranodiorite map unit is a light-colored, biotite-bearing granodiorite that forms the prominent mountain flanking the eastern side of Gregory Canyon (Plate 1). This prominent mountain is referred to as Gregory Mountain, but Larsen (1948) referred to it as Indian Mountain and to the light-colored rock as the Indian Mountain Leucogranodiorite. In hand specimen, the rock has a phaneritic texture with medium- to coarse-crystallinity, is light gray to buff, and has less than 5% dark minerals (biotite and iron-titanium oxides). Quartz, plagioclase, and potassium feldspar are the dominant felsic minerals.

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[6] An aplite is a type of intrusive rock characterized by light color, abundance of quartz and potassium feldspar, and a fine granular texture that resembles the texture of sugar. Aplite is generally found forming dikes.

Besides forming the core of Gregory Mountain, the leucogranodiorite also forms dikes that cut older units. The dikes vary in thickness from less than an inch up to five feet, and in most instances are pegmatitic. The degree of weathering of the leucogranodiorite is generally slight, as can be inferred from the bold outcrops of Gregory Mountain. The dikes, on the other hand, vary in degree of weathering from low to moderate. Moderately weathered dikes are pervasively oxidized and have "cloudy" feldspars, but still preserve their phaneritic texture.

The main body of the leucogranodiorite is in intrusive contact with the metamorphic band of rocks midway along the easterly side slope of Gregory Canyon. As shown in photographs included as Figures 2 through 4 of Attachment 2, the contact zone is narrow and abrupt where it can be observed, but is generally buried under talus. Based on its map position, as inferred from the abrupt change in topography, the contact is nearly vertical.

1.2.3 Soil Resources and Engineering Properties

The soils on the site are alluvial and colluvial, or generated from in-place weathering of the bedrock (residual soils). Based on mapping performed by the U.S. Soil Conservation Service (SCS, 1973), acid igneous rock (AcG) is generally exposed along the easterly slope of the site and soil, if present, generally consists of silty coarse sand (Figure 1-3). Since this soil type is generally composed of large boulders and rock outcrops, it is likely to have a high runoff potential. Erodibility will vary with soil development but is likely to be high to very high.

Two upland residual soils, Las Posas stony fine sandy loam (LrG) and Cieneba coarse sandy loam (ClG2), are exposed on the westerly slope of the canyon. Runoff in these areas can be rapid to very rapid, and the erosion potential can be high to very high. Sandy loam of the Fallbrook series (FaD2) has been mapped at the north end of the canyon. The runoff in this area is medium, and the erosion hazard moderate.

Cieneba very coarse sandy loam (CmrG) is mapped on the steeper slopes of the site, primarily north of SR 76. Runoff in this area is rapid to very rapid and the erosion hazard is high to very high. The Tujunga sand (TuB) is exposed below these slopes and is characterized by very slow to slow runoff and only a slight erosion hazard. Riverwash (Rm) is exposed in the San Luis Rey River stream channel and it is typically composed of sandy, gravelly and cobbly materials. Thin slivers of Visalia sandy loam (VaA and VaD) are mapped on the southwest portion of the site. The VaA soil occurs on nearly level terrain, while the VaD soil occurs on moderate slopes. As a result, runoff for the nearly flat-lying VaA soils is very slow and the erosion hazard is slight. The steeper VaD runoff potential is medium with a moderate erosion hazard.

Laboratory testing was performed by WCC (1995) on soil samples obtained from test pits excavated at the site. A summary of the classification tests performed on the samples from the test pits shown on Figure 1-2 is presented in Table 1-1. Compaction tests, performed in accordance with ASTM D-1557 on material that was finer than the No. 4 sieve, were also completed and a summary of these test results is presented in Table 1-2.

Strength tests were performed on samples remolded to approximately 90 percent of their maximum dry density and a summary of these test results is presented in Table 1-3. The results of consolidation testing are presented in Table 1-4. Finally, laboratory permeability tests were also performed and these results are presented in Table 1-5.

1.2.4 Mineral Resources

San Diego County has a wide variety of mineral resources. Some of these, such as sand, gravel, and dimension stone, are essential to the construction industry and the region's economy. Sand and crushed rock are used as aggregate in Portland cement concrete and asphaltic concrete for construction. Blocks of granite rock (dimension stone) are quarried for decorative rock, monuments, and surface plaster. Of the rock products utilized in San Diego County, concrete-quality sand is in the shortest supply. The major river valleys are by far the most important source of sand in this area. Roughly two-thirds of available sand is in the San Luis Rey River. The San Luis Rey River through the project site is designated as a Mineral Resource Zone-2 (MRZ-2) by the California Department of Conservation, Division of Mines and Geology. The riverbed contains deposits of sand and gravel. The MRZ-2 zone is intended to preserve valuable mineral resources. However, it does not permit extraction of these resources without a major use permit. The MRZ-2 designation, which is an area containing potentially significant mineral resources, is confined to the bed of the San Luis Rey River.

The site is located 2.5 miles southwest of the Pala pegmatite district, which is a widely known source of gems (e.g., tourmaline, beryl and spodumene) and lithium minerals.

The district has an area of about 13 square miles and is underlain by granodiorite, tonalite, and gabbro of the Southern California batholith. The pegmatites themselves are most abundant in the gabbroic rocks, which are known collectively as the San Marcos gabbro, but are also present in reduced amounts in the granodiorites and tonalites. Most of the pegmatite occurs as tabular masses that trend north to north-northwest, and dip gently to moderately westward. They may have strike lengths of as much as a mile, and range from thin stringers (e.g., a small crack filling) to large dikes with bulges nearly 100 feet thick.

The bedrock substrate of Gregory Canyon is formed by rocks similar to those of the Pala district, and pegmatite dikes, albeit rare, have been identified in the course of geologic mapping. There is, therefore, a small possibility that lithium minerals might be found in the bedrock of the site. The probability of this occurrence is small, since 100 years of mineral exploration in and around the Pala district have not yielded mineral prospects in or near Gregory Canyon.

1.3 STRUCTURAL GEOLOGY

The tectonic regime of the region has changed significantly between the time of emplacement of the intrusions of the Bonsall Tonalite and the Indian Mountain Leucogranodiorite and the present. During the Mesozoic, a subduction zone was active off the coast of California, which led to magma generation and intrusion to form these

units. Tectonic conditions changed during the Cenozoic, when subduction ceased, and transform faulting began on what is now identified as the San Andreas fault system (i.e., the underthrust of the Pacific plate was replaced by lateral shear between the plates). Horizontal motion started between 25 and 20 million years ago in the San Diego region (Atwater, 1970), and since then the tectonic "grain" of the Peninsular Ranges province has been dominated by strike-slip faulting along northwest-trending faults like the San Andreas, San Jacinto, Elsinore, and Rose Canyon faults.

The Elsinore fault zone is located approximately 6 miles northeast of Gregory Canyon, and is the closest of these large fault systems to the site. Like the rest of the regional faults, it is the result of the right-lateral strike-slip motion between the North American and Pacific plates, although the individual fault strands within the Elsinore fault zone may have strike-slip, normal, or thrust fault motions[7] as a result of complex local fault geometries (Lamar and Rockwell, 1986). The northwest-trending fabric of the fault zone also results in distinctive structural features, including large-scale structural depressions like the Elsinore Trough, and structural highs such as the Agua Tibia Mountains.

Of more immediate interest to the structural setting of Gregory Canyon is the fact that the "block" between the Elsinore fault zone to the northeast and the Rose Canyon fault zone to the southwest is under a shear stress regime (Figure 1-1). In effect, the area between both fault zones is being "wrenched" clockwise by the relative motion along these faults. Under these conditions, north-oriented extensional fractures form. This is the most likely explanation for the predominance of north-striking fractures on the site, and for the dominant orientation of topographic lineaments in the region.

1.3.1 Regional Faults

Several active faults exist within 60 miles of the proposed Gregory Canyon landfill site. These include the San Andreas, San Jacinto, and Elsinore fault zones, as well as the offshore portions of the Rose Canyon fault zone (Figure 1-1). These fault zones have an overall trend to the northwest, and right-lateral, strike-slip sense of movement. The closest approaches of the different faults to the site are 54 miles for the San Andreas fault, 30 miles for the San Jacinto fault, 6 miles for the Elsinore fault, and 25 miles for the Rose Canyon fault.

San Andreas fault. Based on the large number of historic earthquakes generated along the San Andreas fault, Wallace (1970) estimated that in any given year there is a 20% probability that an earthquake of magnitude (M) 6 would occur somewhere along the 600 miles of the San Andreas fault, and that there is a 1% probability that a magnitude 8 earthquake would be generated in any given year (in 1857, movement along the right-lateral, strike-slip San Andreas fault generated an earthquake with an estimated

[7] Faults are classified in three types according to the tectonic stress that formed them. Faults formed by the lateral shear of one rock mass against another are called strike-slip faults. Faults formed under an extensional tectonic regime, and showing surficial displacements, are called normal faults. Finally, those formed under a compressional regime, and showing surficial displacements, are called reverse faults.

momentum magnitude larger than 8.0 in the Fort Tejon area). In contrast, the trenching and geochronometric studies of Sieh (1978) in Pallett Creek suggest annual probabilities of 0.005 to 0.003 for magnitude 8 earthquakes.

For the purpose of evaluating seismic hazard, the California Division of Mines and Geology (CDMG) has estimated the Maximum Credible Earthquake (MCE) of earthquakes along the San Andreas fault – Southern Segment to be M7.4 (CDMG, 1996).

San Jacinto fault. The San Jacinto fault extends more than 120 miles from northwest of El Centro to northwest of San Bernardino. This fault has been the source of numerous micro-seismic events in modern history. At Superstition Hill, just north of the international border, a M6.6 event occurred in November 1987. Another recent rupture zone, as suggested by aligned fault scarps, extends across Borrego Mountain (San Diego County) and was the source of a magnitude 6.8 seismic event in 1968. The Anza section of the fault extends northwestward from the Borrego Mountain section and generated a magnitude 6.8 event in 1918. Finally, there was an 1890 event along the San Bernardino Valley section of the fault, in which surface lateral displacement was estimated at 1.4 + 0.4 m. Blake (1993) estimated the long-term slip rate of the Lytle Creek section of the fault at 10 mm/yr.

For the purpose of evaluating seismic hazard, the MCE value for earthquakes along the San Jacinto-Anza fault segment (the highest magnitude segment near the site) was estimated to be M7.2 (CDMG, 1996).

Elsinore fault. The Elsinore fault extends 150 miles from the Mexican border to the northern edge of the Santa Ana Mountains. Five earthquakes of magnitude greater than 5 have been generated along this fault during the last 100 years, three of which had epicenters near Lake Elsinore. According to Durham and Yerkes (1964), the Whittier section of this fault may have been active since Miocene time, as evidenced by the thickness and distribution of Cenozoic strata. According to Blake (1993), the long-term recurrence interval for magnitude 7 events is estimated at 100 years, from which an annual probability of occurrence of 1% can be calculated. Lamer and Rockwell (1986) estimated the long-term slip rate at 6 mm/yr.

For the purpose of evaluating seismic hazard, the CDMG has estimated the MCE of earthquakes along the Elsinore-Temecula and Elsinore-Julian fault segments were estimated to be M6.8 and M7.1, respectively (CDMG, 1996).

Rose Canyon/Newport-Inglewood fault. The offshore Rose Canyon/Newport-Inglewood fault zone extends more than 150 miles from the international border to Newport Beach and includes a 1,000 to 15,000-foot wide zone of strike-slip faults, folds, and related thrust faults. Of immediate interest for the project is the Del Mar segment, which extends from the latitude of Carlsbad to the latitude of La Jolla.

With respect to historical seismic activity, rupture along the northernmost segment of the fault (the South Los Angeles segment), resulted in the 1933 magnitude 6.3 Long Beach earthquake. In addition, where on shore, the fault zone has significant micro-seismic activity, while offshore seismicity south of Newport Beach decreases by an order of magnitude. For the purpose of evaluating seismic hazard, the MCE value for earthquakes along the Rose Canyon fault was estimated to be M6.9 (CDMG, 1996).

1.3.2 Local Structural Geology

Lineament Analysis

GLA (1997) inspected historical aerial photographs in order to identify potential structural discontinuities in the area of the proposed GCLF. Six sets of aerial photographs were used in the lineament analysis of the site.

The large-scale lineaments identified on and around the proposed footprint of the landfill are shown on Plate 1. On this map, lineaments have been defined by 1) single stretches of a ravine, and accordingly many of them are simple "shortest and steepest" paths for surface water drainage; 2) on the base of geomorphology (e.g., alignment of topographic saddles, linear cliff scarps) or tonal differences; or 3) well defined fractures (as in Gregory Mountain), or dikes.

In the small-scale photographs (1:42,500 to 1:65,000), Gregory Canyon seems to be straight, but in the large-scale photographs it does not appear to be truly "linear". At the large scale, as shown on Plate 1, a very short linear segment is identified near the head of the canyon (A on Plate 1), a tonal lineament off the thalweg of the canyon to the west (B), and a longer linear segment near the mouth of the canyon (C). There is also a set of three lineaments that are subparallel to the canyon, off the thalweg to the east (D).

Perpendicular to the length of the canyon, on the north are the geomorphologic lineaments defined by the cut of the San Luis Rey River (E), and a tonal lineament defined by the transition from grass to scrub vegetation (F). Toward the middle of the canyon, on the west flank, there are four steep ravines (G through J), but they do not seem to have corresponding lineaments east of the thalweg.

The leucogranodiorite, which crops out along the eastern portion of Gregory Canyon, is criss-crossed by joints, but in this area no lineaments were identified in the photographs that might suggest that the joints extend into the metamorphic wedge or the weathered tonalite to the west.

Aerial photograph review also included inspection of lineaments outside of Gregory Canyon. However, the lineament analysis did not disclose regional, through-going discontinuities across the footprint of the site. Other lineaments (e.g., D) appear to converge toward the Gregory Canyon alignment, and no lineaments have been identified that diverge from it.

Discontinuities at outcrop level

Inspection of the limited bedrock exposures indicates that structural discontinuities (joints, dikes) are common in the rocks that form the substrate of the canyon. In order to evaluate orientation, type, and characteristic spacing of these discontinuities, three "lines" were cleared of vegetation and cover soil (Plate 1), and the structural attitude of all observed discontinuities along them was measured. Line 1 was exposed along the floor of the north-trending road that runs mid-slope along the west flank of the canyon, and had a total length of 530 feet. Line 2 was excavated along the wall of the east-trending road that descends in a straight line from the western flank into the thalweg of the canyon; the wall could not be properly cleaned and this 75-foot line is thus of limited use in characterizing spacing. Line 3 was cleared along the floor of the same road, and had a total length of 220 feet.

An interpretation of structural orientations was performed using stereographic projections, to represent and analyze the three-dimensional data in two dimensions. The stereographic plots of the fracture data taken from 424 measurements in outcrop are provided in the Phase 5 - Hydrogeologic Report (1997). In summary, the combined structural data suggests the existence of four directions of preferred orientation:

	Dip direction	Strike direction	Dip angle	Dominant feature
Direction 1	270°	360°	65°	Fractures
Direction 2	90°	360°	80°	Fractures
Direction 3	255°	345°	60°	Dikes
Direction 4	330°	60°	65°	Dikes

If the structural attitudes of fractures and dikes are plotted separately, the stereonet plot for the fractures has primary maxima that correspond to Directions 1 and 2 in the table above, whereas the plot for dikes has maxima that correspond to Directions 3 and 4.

Spacing between discontinuities, and patterns of spatial distribution, can be characterized through the use of standard statistical techniques, and the discontinuity data of Gregory Canyon were tested for randomness and uniformity.

Results of the randomness analysis indicated that the data from Line 1, which has a general north-south orientation, appear to be randomly distributed, while the data from east-trending Line 3, do not fit the random distribution. The difference may be related to the orientation of the lines, the general dominance of north-trending discontinuities, and the fact that the east-trending Line 3 had a better chance of intersecting the more abundant north-trending discontinuities than Line 1.

Spacing between discontinuities in Lines 1 and 3 was also evaluated. In the case of Line 1, 57% of the spacings are less than or equal to 2 feet, and 9% of the spacings are larger than or equal to 9 feet. For Line 3, in contrast, 91% of the spacings are less than or equal to 2 feet.

The intersection of each pair of planes defines a line in 3-dimensional space, whose orientation can be expressed in terms of plunge direction (the azimuth of the projection of the line on the horizontal plane) and plunge angle (the vertical angle of the line with respect to the horizontal), as follows:

	Plunge direction	Plunge angle	Formed by the intersection of:
Intersection line A	180°	0°	Direction 1 and Direction 2
Intersection line B	222°	55°	Direction 1 and Direction 3
Intersection line C	300°	62°	Direction 1 and Direction 4
Intersection line E	176°	19°	Direction 2 and Direction 3
Intersection line F	16°	56°	Direction 2 and Direction 4
Intersection line I	286°	57°	Direction 3 and Direction 4

The outcrop fracture data summarized above indicates the apparent predominance of north-striking discontinuities, and the relative paucity of east-striking discontinuities. The presence of a significant number of discontinuities with other orientations would enhance interconnection of the fractures.

1.3.3 Local Faults

Faulting was evaluated by WCC (1995) for the project site and surrounding area based on a review of geologic literature, large- and small-scale stereo aerial photographs, and field reconnaissance. The closest mapped faults to the site are an east-northeast-trending fault first located by Jahns and Wright (1951), and a shear zone described by WCC (1995) (Figure 1-1). The Jahns and Wright (1951) fault is the only nearby fault depicted in the 1994 Fault Activity Map of California (Jennings, 1994), and it shows no evidence for Cenozoic displacement (i.e., it is an inactive fault).

With respect to the potential shear zone located across SR 76, WCC (1995) noted that there is no evidence to support continuity of the high-angle shear feature (such as lineations or similar exposures) along its general strike to the north or south. From this they inferred it to be a localized feature. GLA (1999) inspected this outcrop, collected six selected samples for thin-section petrography, and carefully inspected its possible extensions to the north and south (on the flank of Gregory Mountain across the San Luis Rey River). As a result of these analyses, it was concluded that the so-called shear zone is actually a steep planar contact between metamorphic rocks and hydrothermally-altered gabbro. The gabbro is brecciated (i.e., the rock is not homogeneous, but rather it is formed by an agglomeration of angular blocks), but the fragments do not show tectonic shearing, alignment, or fault gouge between them (photographs of this outcrop are provided in Figures 9 and 10 of Attachment 2). A couple of hundred feet east of the contact the rock becomes progressively less brecciated and hydrothermally altered.

The 200-foot zone of brecciated gabbro does not have the characteristic features of a fault zone. Since such a thick "fault zone" would be indicative of a major fault, shearing should be pervasive. However, since there are no prominent shear planes in this portion

of the outcrop a fault origin is not interpreted. In addition to the general lack of shearing, careful inspection of the ravines to the north of the outcrop did not disclose continuation of the breccia, and GLA (1999) concluded that it has the shape of a vertical chimney, rather than a planar feature. The limited extent of the breccia zone in the strike direction is uncharacteristic of a major fault zone. In contrast, intrusive breccia chimneys or pipes are common in shallow plutons (e.g., Norton and Cathles, 1974), and characteristically show the effects of hydrothermal alteration.

To confirm this interpretation GLA (1999) made a careful inspection of the north flank of Gregory Mountain, where the contact would be reasonably expected to project if it were an extensive planar feature (Figure 11 of Attachment 2). This inspection identified only non-brecciated tonalite/gabbro along the northern flank of Gregory Mountain, thus confirming that the gabbroic breccia does not extend across the San Luis Rey River.

Finally, GLA performed a careful inspection of the outcrops created by SR 76. These outcrops are in direct alignment with Gregory Canyon itself, and expose a continuous non-brecciated and non-faulted section of weathered tonalite/gabbro. This continuous section is further evidence that a major fault zone does not extend along the axis of Gregory Canyon.

1.4 GEOLOGIC HAZARDS

The following sections provide a summary of the geologic hazards that might be associated with surficial processes including landslides, rockfalls and debris flows. In addition, geologic hazards associated with deep-seated processes from faults and seismic hazards are also discussed below.

1.4.1 Landslides

The potential for landsliding was evaluated by WCC (1995) based on review of stereo aerial photographs and field reconnaissance study. Geologic or geomorphic features characteristic of landslides were not observed, and given the crystalline nature of the underlying bedrock materials, landsliding is not expected to create a significant hazard at this site.

1.4.2 Rockfalls

Rockfalls are abrupt movements of independent blocks of rock that become detached from steep slopes. Falling rocks can reach the base of a slope by free-falling, bouncing, rolling down the slope surface, or by some combination of the above. There is clear evidence that rockfalls have occurred at the site during mass wasting of Gregory Mountain located east of the site.

1.4.3 Debris Flows

Earth, mud, and debris flows form when a mass of unconsolidated sediment is mobilized by sudden ground vibration (e.g., an earthquake) or by a sudden increase in weight and

pore water pressure (e.g., after soaking of the soil by heavy rains). The initial movement of a flow is enhanced by steep topography and deforestation, but once mobilized, flows can spread over gently sloping terrain.

Debris flows cannot be forecasted, but the susceptibility for formation of debris flows on any given site can be estimated by looking for evidence of previous flow events. GLA (1998) reviewed aerial photographs of the site, and concluded that there is a mappable deposit of poorly-sorted colluvium material that could have been formed as a debris flow deposit (Qco [Plate 1]). The deposit forms a landform with a rough lobate (e.g., rounded) shape and comparatively steep boundaries, but lacks levees or pressure ridges, and so could also have been formed by erosion of an older colluvial fan.

1.4.4 Faults

As stated in Section 1.3.3 above, there are no active faults in the immediate area of the Gregory Canyon site. In addition, there is no evidence of a major fault zone extending along the axis of Gregory Canyon.

The Elsinore fault zone, located approximately six miles from the site, is the most likely source of strong seismic motion in the area of the proposed Gregory Canyon landfill site. The Elsinore fault extends 150 miles from the Mexican border to the northern edge of the Santa Ana Mountains. Five earthquakes of magnitude greater than 5 have been generated along this fault during the last 100 years, three of which had epicenters near Lake Elsinore.

As stated above, to apply an additional margin of safety, the site was designed for the Maximum Credible Earthquake (MCE). An MCE event of M7.1 was used for the Elsinore-Julian Fault and M6.8 was used for the Elsinore-Temecula Fault (CDMG, 1996). For this analysis, a deterministic estimation of the peak horizontal acceleration was calculated for the MCE using the computer program EQFAULT (Blake, 2000). A series of attenuation relationships, based on published seismological papers, were used to produce the range of peak horizontal accelerations presented below.

Maximum Credible Earthquake

Fault Scenario	Range	Mean/Average
Elsinore-Temecula fault M6.8 earthquake 5.5 miles (8.8 km) from the site	0.2g to 0.39g	0.34g
Elsinore-Julian fault M7.1 earthquake 6.0 miles (9.6 km) from the site	0.22g to 0.40g	0.35g
San Andreas fault-Southern Segment M7.4 earthquake 47.7 miles (76.7 km) from the site	0.04g to 0.07g	0.06g
San Jacinto-Anza fault M7.2 earthquake 28.1miles (45.3 km) from the site	0.08g to 0.11g	0.09g
Newport- Inglewood/Rose Canyon fault M6.9 earthquake 22.6 (36.4 km) from the site	0.08g to 0.12g	0.09g

From these estimates, assuming a MCE event, it appears that the area of the Gregory Canyon proposed landfill site expansion is likely to experience short-period peak horizontal accelerations between 0.2g and 0.4g for a near-field earthquake and about 0.1g for a far-field earthquake.

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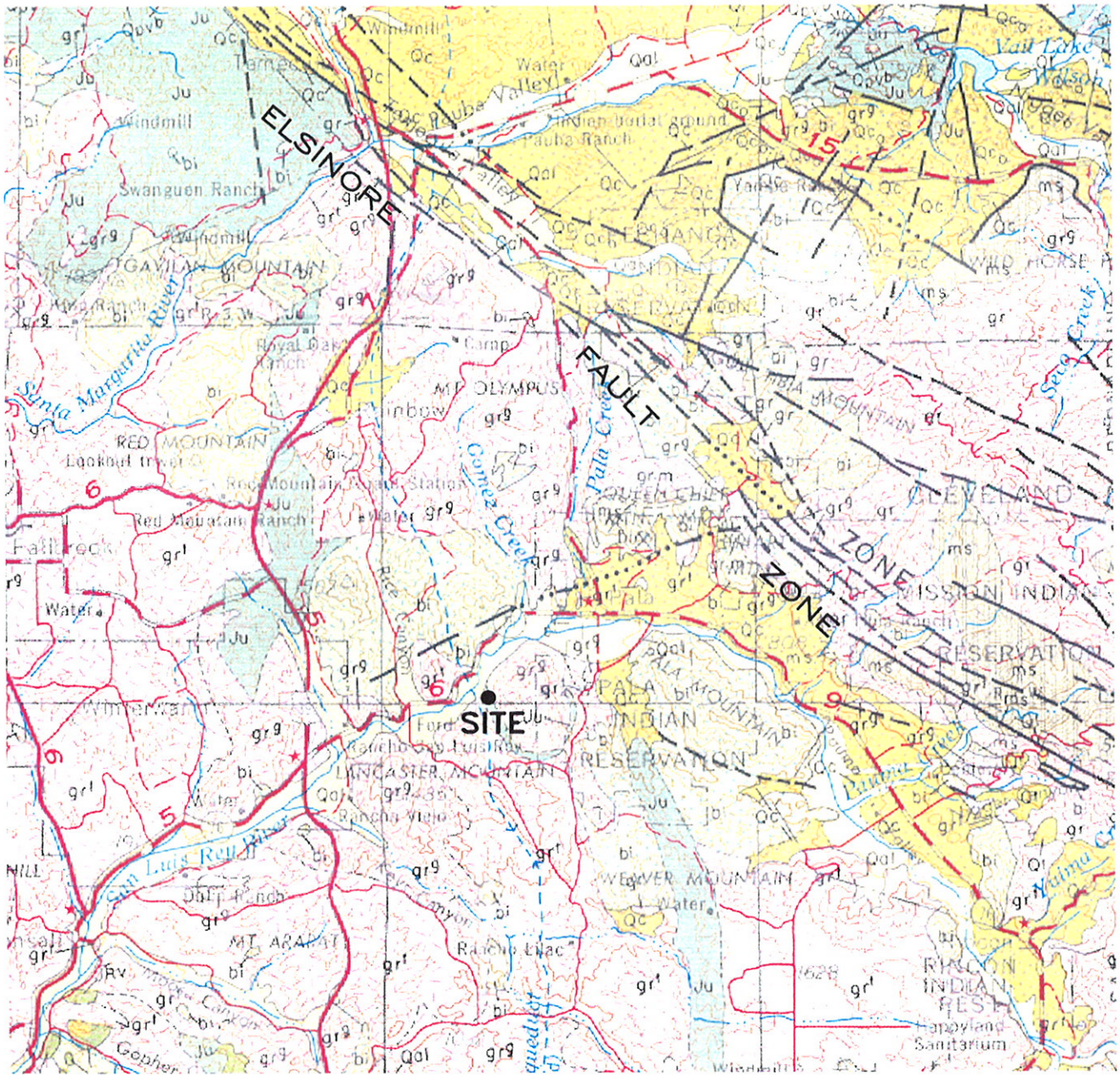
SECTION 1.0

FIGURES



REFERENCE: CDMG, GEOLOGIC MAP OF CALIFORNIA, SANTA ANA SHEET (1965)

APPROXIMATE SCALE: 1" = 14,000'

N

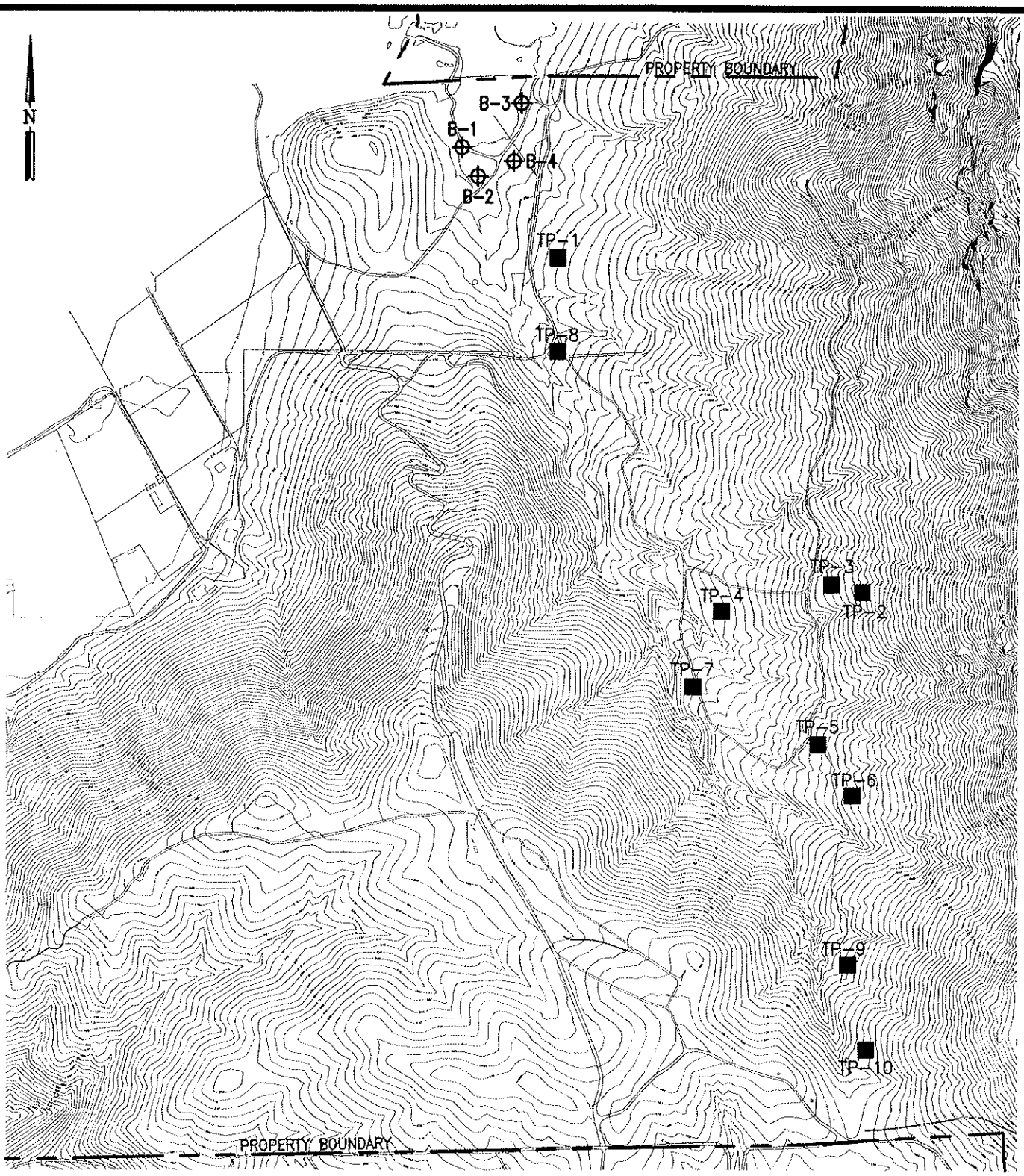
FIGURE 1-1

TECTONIC FRAMEWORK

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539



GRAPHIC SCALE

350 0 175 350 700

(in feet)

1 inch = 700 ft.

EXPLANATION:

■ TEST PITS EXCAVATED BY WOODWARD CLYDE CONSULTANTS (1995)

⊕ GEOTECHNICAL BORINGS (GLA, 1998)

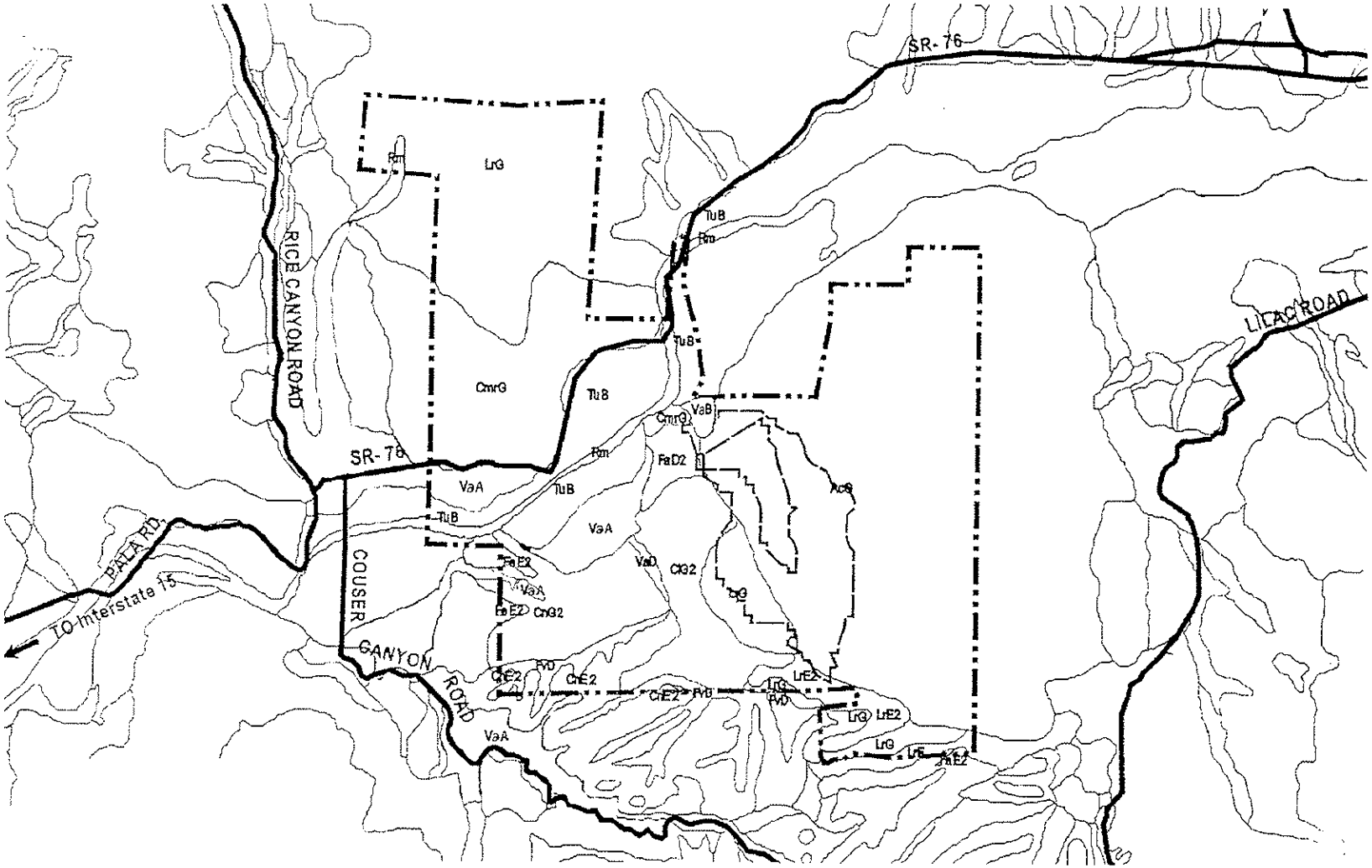
FIGURE 1-2

TEST PIT AND LIQUEFACTION BORING LOCATION MAP

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539



APPROXIMATE SCALE: 1" = 2800'

FIGURE 1–3

SOILS MAP FOR PROJECT SITE

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES GREGORY CANYON LANDFILL SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539

NOTE: SEE THE TEXT FOR INFORMATION ABOUT THE SOILS TYPES SHOWN ON THE MAP.

SECTION 1.0

TABLES

TABLE 1-1
SUMMARY OF SOIL CLASSIFICATION TESTS

SUMMARY OF SOIL CLASSIFICATION TESTS SAMPLE NUMBER	SAMPLE DEPTH (ft)	SOIL CLASSIFICATION	GEOLOGIC UNIT	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	NO. 200 SIEVE (%)
TP1-2	2-3	Fine sandy lean clay (CL)	Older colluvium	10	30	17	53
TP2-1	0-1	Clayey fine sand (SC)	Topsoil	3	28	15	38
TP2-4	3-5	Clayey fine sand (SC)	Highly weathered metamorphic rock		29	15	44
TP3-1	1-2	Fine sandy lean clay (CL)	Residual soil		32	18	56
TP4-2	3-4	Fine sandy lean clay (CL)	Residual soil	8	24	10	61
TP4-3	6-7	Silty medium to coarse sand (SM)	Highly weathered tonalite				
TP4-4	1-4	Fine sandy lean clay (CL)	Residual soil		23	10	58
TP4-5	4-7	Silty sand (SM)	Highly weathered tonalite			NP	18
TP5-1	2	Fine sandy lean clay (CL)	Residual soil	10	39	26	56
TP5-2	4-5	Silty sand with clay (SM)	Highly weathered metamorphic rock				
TP5-3	3-5	Silty fine sand (SM)	Highly weathered metamorphic rock			NP	42
TP6-1	0-1	Silty fine sand (SM)	Topsoil	2		NP	33
TP6-2	2.2-5	Silty fine sand (SM)	Colluvium	6		NP	31
TP7-2	2.2-5	Clayey fine sand (SC)	Older colluvium	8	28	12	31
TP8-1	1-2	Silty fine sand (SM)	Colluvium			NP	26
TP9-1	1-3	Silty fine sand (SM)	Colluvium			NP	43
TP9-2	3-6	Silty fine sand (SM)	Highly weathered metamorphic rock			NP	21
TP10-1	1-4	Silty fine sand (SM)	Colluvium			NP	34
TP10-2	4-7	Silty fine sand (SM)	Colluvium			NP	32

Source: Woodward-Clyde, 1995

TABLE 1-2
SUMMARY OF LABORATORY COMPACTION TEST RESULTS

SAMPLE NUMBER	SOIL DESCRIPTION	MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)
TP2-4	Clayey fine sand (SC)	129.5	10.5
TP3-1	Fine sandy lean clay (CL)	128.0	10.5
TP4-4	Fine sandy lean clay (CL)	131.0	10.0
TP4-5	Silty sand (SM)	131.0	8.5
TP5-3	Silty fine sand (SM)	121.0	12.5
TP8-1	Silty fine sand (SM)	129.5	8.5
TP9-1	Silty fine sand (SM)	132.0	9.5
TP9-2	Silty fine sand (SM)	127.0	10.0
TP10-1	Silty fine sand (SM)	133.5	8.5
TP10-2	Silty fine sand (SM)	133.0	9.0

Source: Woodward-Clyde, 1995

TABLE 1-3
SUMMARY OF STRENGTH TEST RESULTS

SAMPLE NUMBER	SAMPLE DEPTH (FT)	SOIL CLASSIFICATION	GEOLOGIC UNIT	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	NORMAL STRESS	COHESION (PSF)	FRICTION ANGLE (DEGREES)
TP2-4	3-5	Clayey fine sand (SC)	Highly weathered granite	11	116	Low	440	28
TP3-1	1-2	Fine sandy lean clay (CL)	Residual soil	11	114	Low	240	28
TP4-5	4-7	Silty sand (SM)	Highly weathered tonalite	9	119	Low	500	47
TP5-3	3-5	Silty fine sand (SM)	Highly weathered tonalite	13	108	Low	720	32
TP5-3	3-5	Silty fine sand (SM)	Highly weathered tonalite	13	109	High	1500	30
TP8-1	1-2	Silty fine sand (SM)	Colluvium	9	117	Low	650	39
TP9-1	1-3	Silty fine sand (SM)	Colluvium	10	121	Low	770	30
TP9-2	3-6	Silty fine sand (SM)	Highly weathered granite	10	114	Low	660	41
TP10-1	1-4	Silty fine sand (SM)	Colluvium	9	120	Low	680	33
TP10-1	1-4	Silty fine sand (SM)	Colluvium	9	120	High	1120	33
TP10-2	4-7	Silty fine sand (SM)	Older colluvium	9	120	Low	610	33
TP10-2	4-7	Silty fine sand (SM)	Older colluvium	9	120	High	150	35

Source: Woodward-Clyde, 1995

TABLE 1-4
SUMMARY OF CONSOLIDATION TESTS

SAMPLE NUMBER	DEPTH (FT)	SOIL DESCRIPTION	LIQUID LIMIT	PLASTICITY LIMIT	VIRGIN COMPRESSION INDEX
TP2-4	3 to 5	Clayey sand (SC)	29	14	12.4
TP4-4	1 to 5	Fine sandy lean clay (CL)	23	13	16.8
TP9-1	1 to 3	Silty sand (SM)	--	NP	11.3

NP = Non-plastic
All samples inundated with water at 2 ksf.
Source: Woodward-Clyde, 1995

TABLE 1-5
SUMMARY OF LABORATORY PERMEABILITY TEST RESULTS

SAMPLE NUMBER	SOIL DESCRIPTION	DRY DENSITY (PCF)	NO. 200 SIEVE (%)	HYDRAULIC CONDUCTIVITY[a] (CM/SEC)
TP2-4	Clayey fine sand (SC)	116	44	3.7×10^{-6}
TP3-1	Fine sandy lean clay (CL)	115	56	3.8×10^{-7}
TP4-4	Fine sandy lean clay (CL)	118	58	7.3×10^{-7}
TP4-5	Silty sand (SM)	118	18	3.5×10^{-4}
TP5-3	Silty fine sand (SM)	109	42	1.1×10^{-6}
TP8-1	Silty fine sand (SM)	116	26	7.4×10^{-7}
TP9-1	Silty fine sand (SM)	119	43	7.3×10^{-7}
TP9-2	Silty fine sand (SM)	114	21	1.6×10^{-4}
TP10-1	Silty fine sand (SM)	120	34	7.8×10^{-6}
TP10-2	Silty fine sand (SM)	120	32	7.6×10^{-6}

[a] Samples remolded to 90 percent relative compaction (maximum density per ASTM D-1557) at optimum moisture content.
Source: Woodward-Clyde Consultants, 1995

SECTION 2.0

HYDROGEOLOGY

2.0 HYDROGEOLOGY

Hydrogeologic investigation and studies of Gregory Canyon and the surrounding area were performed to:

- provide an understanding of the water-bearing zones within the limited alluvial section and underlying bedrock,
- define the piezometeric surface and groundwater flow,
- establish existing water quality,
- establish the monitorability of the groundwater system, and
- generate an effective water quality monitoring network for the proposed landfill design.

This section provides a summary of the regional and local hydrogeology developed from geologic and hydrogeologic characterization studies completed on the site for the GCLF project.

2.1 HYDROGEOLOGIC SETTING

Gregory Canyon is located in an area dominated by crystalline rocks with intervening alluvial valleys. Limited groundwater exists in the fractures within the crystalline rocks compared with the groundwater stored in alluvial sediments. Provided herein is a discussion of the hydrogeologic characteristics in the region surrounding Gregory Canyon.

2.1.1 Regional Hydrogeologic Setting

The Gregory Canyon watershed is tributary to the San Luis Rey River and is part of the San Luis Rey Hydrologic Unit (Figure 2-1). This hydrologic unit encompasses a semi-rectangular area of about 565 square miles. The San Luis Rey River occupies a narrow valley in the basin that is filled with water-bearing alluvial sediments bounded by sedimentary rocks in the lower reach of the basin, and igneous and metamorphic rocks in the middle and upper reaches. The alluvial deposits along the San Luis Rey River form narrow elongated groundwater basins. The San Luis Rey Hydrologic Unit has been subdivided into three hydrologic areas from east to west, which include the Warner, Monserate and Lower San Luis (Mission). The Monserate Hydrologic Area occupies approximately the middle one-third of the San Luis Rey Hydrologic Unit and is the closest to the proposed landfill. The Monserate Hydrologic Area is further subdivided into three hydrologic subareas which include from east to west, the La Jolla Amago, Pauma and Pala Hydrologic Subareas (RWQCB 1994). In this area of the site, groundwater moves from east to west, down gradient from the Pauma Basin to the Pala Basin and then to the Bonsall Basin of the Lower San Luis Hydrologic Area. The boundaries of each basin are drawn where the basement complex (hard crystalline rock) is exposed at the surface and where distinct bedrock constrictions in the San Luis Rey Valley segment the valley fill. The alluvial and colluvial deposits of the San Luis Rey River and tributary canyons, are composed mainly of coarse granular materials overlying variably weathered bedrock.

Because groundwater recharge is seasonal and inconsistent, groundwater levels in the valley fluctuate. Historical depth-to-water measurements from the period between 1965 to 1990 for the alluvial aquifer indicate depth to groundwater ranges from the ground surface to approximately 25 feet below ground surface (bgs) [California Department of Water Resources (CDWR) 1971; U.S. Geological Survey (USGS) 1990].

The GCLF site is located to the south and adjacent to the Pala Basin boundary (Figure 2-2). The Pala Basin covers approximately 4,500 acres, being nearly eight miles long and averaging about 0.5 miles in width (NBS Lowry, 1995). Total thickness of the alluvial sediments in the Pala Basin ranges from zero at the basin margins to in excess of 165 feet, over the proposed GCLF bridge crossing (GLA, 2000). A study by the USGS (Moreland, 1974) estimated the maximum depth of the alluvium in the Pala Basin at 244 feet (in one well 9S/2W-26G1 located in the far upper reach of the Pala Basin), and an average depth of 150 feet. At well GMW-2 (Figure 2-3), located near the southern edge of the Pala Basin at the mouth of Gregory Canyon, the thickness of alluvium is only about 50 feet (G&M 1990).

Due to an abundance of coarse sand and gravel deposits and minimal clay, the best recharge areas are located in the central and west-central portions of the basin (NBS Lowry, 1995). Reported well yields for alluvium in the Pala Basin from a study by NBS Lowry (1995) indicate rates of production range from 300 gpm to 1600 gpm. Specific capacities for alluvium along the axis of the basin range from 13 gallons per minute per foot (gpm/ft) to greater than 115 gpm/ft of drawdown (Moreland 1974). Hydraulic conductivities range from 750 gpd/ft^2 to 1000 gpd/ft^2.

Granitic and metamorphic crystalline rocks underlie the valley fill and adjacent slopes. Groundwater occurrence and movement in the bedrock medium depends upon fracture size, frequency density and interconnection, rather than matrix properties as in alluvial soils. Though it is common usage to speak of a bedrock "aquifer" (as distinct from the alluvial aquifer), wells penetrating fractures containing groundwater are not typically a dependable source of water for large-scale agricultural, municipal or industrial uses. Highly productive wells completed in bedrock are generally those located within alluvial valleys, which store groundwater that is in hydraulic connection with the underlying fracture system (San Diego County Water Authority [SDCWA], 1997). Wells within valleys and canyons where surficial deposits are absent or minimal generally yield only small quantities of groundwater and here the bedrock aquifer may be more important for recharge to downstream alluvial aquifers.

The distinction, in terms of well yields, between alluvial and bedrock aquifers is illustrated in the histograms shown on Figure 2-4. The histograms are developed from well data presented in Table 2-1 and portray frequency of occurrence verses well yield from wells in the vicinity of Gregory Canyon. Well yields from alluvial wells follow a normal distribution about a mean yield of 300 gpm, whereas those from bedrock wells follow a log-normal distribution with a mode between 5 and 20 gpm. These results are proportional to the relative porosity of the two media (25-50% for alluvium, and 0-10% for fractured crystalline rock). The statistical distributions provide an empirical context for distinguishing between the two types of groundwater occurrence.

Although it is a source of recharge to the alluvial aquifer, there has been little attempt to quantify the properties of the bedrock flow system regionally. In fact, the Pala Basin as defined by the CDWR (1971) does not include the adjacent bedrock aquifer. The study of Lee Valley (located in the southern portion of San Diego County) by Kaehler and Hsieh (1994) is the only known comprehensive investigation of a local bedrock aquifer. It is pertinent to Gregory Canyon because of the similarity in the magnitude and distribution of bedrock well yields obtained from Lee Valley, which are included on Figure 2-4.

2.1.2 Surrounding Water Uses

Existing Groundwater Wells. Traditionally Pala Basin groundwater has been used for agricultural and livestock purposes, although more recently a few commercial materials companies have been established in the basin. The basin groundwater provides nearly all of the potable water supply for the Pala Indian Reservation, the San Luis Rey Municipal Water District (SLRMWD), and for other municipal and agricultural purposes in the basin (NBS Lowry, 1995). It is anticipated that in the future the Pala Basin groundwater within a mile of the site will be used for municipal and agricultural purposes. The USEPA has not designated the Pala Basin as a sole source aquifer.

The locations of known off-site wells within about one mile of Gregory Canyon are shown on Figure 2-2. To develop this map, water well Drillers Reports were obtained from the State Department of Water Resources. Table 2-1 provides a summary of the well information for these wells. Though, it should be noted that field verification was not performed as part of this well search. On this figure, the largest concentration of wells is in the alluvial basin of the San Luis Rey River, with a few additional domestic wells serving dwellings in Couser Canyon. It should also be noted that according to the operators of orchards south of Gregory Canyon interviewed as part of an earlier well reconnaissance, irrigation water for these orchards is derived from the First San Diego Aqueduct and not from wells.

Beneficial Uses. The Porter-Cologne Water Quality Control Act and the Federal Water Pollution Control Act Amendments of 1972 require that Water Quality Control Plans (Basin Plans) be prepared for the nine state-designated hydrologic basins in the State of California. The State Water Resources Control Board (SWRCB) approved the San Diego Region Basin Plan (Basin Plan) on March 20, 1975 and an update to the Basin Plan was drafted in 1994 (RWQCB 1994). The purpose of the San Diego Region Basin Plan is to identify beneficial water uses, establish water quality objectives, implement a program to meet these objectives, and establish a surveillance program to monitor the effectiveness of the plan.

Existing beneficial uses and water quality objectives have been established by the RWQCB for groundwater in the Pala Hydrologic Subarea to include municipal, agricultural, and industrial purposes. Because groundwater in the Pala Hydrologic Subarea is designated for use as domestic or municipal supply, chemical constituents in groundwater must not exceed the maximum contaminant levels (MCLs) as specified by both state and federal regulations. The primary standards are provided in California Code of Regulations, Title 22 (CCR 22), Chapter 15, Article 4, §64431 and 64444, Tables 64431-A and 64444-A and the Code of Federal Regulation, Title

40, part 141 (40 CFR 141). The primary standards are threshold concentrations for specific minerals and chemicals to protect human health.

The state has also developed secondary standards for constituents that may adversely affect the taste, odor or appearance of the water. These secondary MCLs are provided in the CCR 22, Chapter 15, Article 4, §64449, Tables 64449-A and -B. Groundwater in the Pala Hydrologic Subarea is also designated for use as an agricultural supply, and it should not contain concentrations of chemical constituents above these secondary standards.

Water Resources. The San Diego County Water Authority (SDCWA) is a public agency that was founded in 1944 to supplement existing supplies by importing water into the San Diego Region. In response to continued demand for water and the decreased reliability of imported water sources, recently SDCWA has been evaluating the potential to develop additional local water supplies and water storage. SDCWA is considering water conservation, water transfers, water reclamation and purification, and groundwater resource development and management. SDCWA has developed a Groundwater Resource Development Report (June 1997) to assist in developing a Groundwater Implementation Plan and to serve as a reference and resource document to be updated periodically. In this report, the Mission, Bonsall, Pala and Pauma basins within the San Luis Rey River Basin, were considered (among others) as productive shallow alluvial aquifers within the SDCWA service area.

Several SDCWA member agencies and other water agencies have either implemented groundwater projects or are planning or evaluating potential projects to develop potable water supply. Within the Lower San Luis Rey River Hydrologic Area, the City of Oceanside is extracting 2,200 acre-feet per year (AFY) of groundwater from the Mission Basin and that project is being expanded to include an additional 4,900 AFY of potable water supply. A conceptual project has also been identified by the City of Oceanside to expand groundwater development in the Mission basin by an additional 15,300 AFY of supply. The Rainbow Municipal Water District is evaluating the development of 3,000 AFY of potable supply from the Bonsall basin. For the Monserate Hydrologic Area, in which Gregory Canyon is located, the Yuima Municipal Water District is pumping up to 2,700 AFY from the Pauma basin.

SDCWA assigned a high score to the Pala/Pauma Basins, along with several other groundwater basins and surface reservoirs, during its initial "Regional Screening of New Sources of Water." Accordingly, these basins were targeted for further analysis under the "Analysis of Alternatives". The resulting analysis of alternatives ranked the groundwater basins including the Pala/Pauma groundwater basins in a lower group (less attractive), and therefore they were not considered further as a viable new source of water. The primary reasons for the low ranking included very low groundwater elevations that would require extensive pumping facilities for water conveyance, relatively little emergency storage capacity, and the need for extensive infrastructure including wells and connecting pipelines throughout the basin.

2.2 SITE HYDROGEOLOGY

As stated above, the area surrounding the project site is mixed use, with a predominantly rural character. Agricultural uses are located on the floor of the San Luis Rey drainage. Pala Rey

Ranch is located to the west of the site, Hanson Aggregates (Hanson), a sand and gravel mining operation with a concrete batch plant, is located to the northeast, lower Rice Canyon is located to the northwest, Couser Canyon is to the south, and the Pala Indian Reservation, which includes a portion of Gregory Mountain, is located to the east. The abandoned Lucio Family Dairy, which closed in 1986, is located north of the San Luis Rey River, and south of SR 76. The abandoned Pete Verboom Dairy exists to the west of the Lucio Dairy and is adjacent to and south of SR 76.

Agricultural land refers to areas supporting active agricultural cultivation or cattle grazing. About 97 acres of agricultural land, primarily grazing areas, exist on the project site. The dairies on the project site, which are also considered agricultural lands, were mapped as a combination of agricultural land and developed land and occupy 88.3 acres. Existing land uses within the general area include a pear orchard, pastures, various farm outbuildings, and dirt access roads along fields. Pastures and a hay shed are situated on the valley floor on the south side of the river. The Hanson's sand and gravel mining operation and concrete batch plant is located approximately 1,200 feet upstream of the existing First San Diego Aqueduct crossing of the San Luis Rey River.

2.2.1 Local Hydrogeology

Gregory Mountain is an elongated, relatively flat-topped prominence, drained to the east, north and west (into Gregory Canyon) by steep, rocky secondary canyons. The potential catchment area of the mountain is large and it clearly dominates recharge to Gregory Canyon. Recharge to Gregory Canyon from the west ridgeline and southern drainage divide is believed to be relatively minimal. Though no permanent springs have been identified in Gregory Canyon, the vigorous development of riparian vegetation along the thalweg of the canyon, and its tributaries, suggests that the piezometric level of the underlying aquifer is close to the surface along the lowest points of the canyon. Studies by GLA, and others including the drilling and construction of groundwater monitoring wells, have assisted in evaluating groundwater flow within the project area.

There are two distinct groundwater zones within Gregory Canyon. An alluvial aquifer hosted by the sediment wedge at the mouth of the canyon, and a bedrock aquifer hosted by the fractured tonalite that forms the substrate of the canyon. The general direction of groundwater movement in both aquifers is northerly, toward the alluvial aquifer of the San Luis Rey River (Figures 2-3A and 2-3B; Plate 2).

Alluvial Aquifer. An alluvial wedge occupies the lower reaches of Gregory Canyon. Figure 2-3A shows a contour map of the water table in the alluvial aquifer based on data collected on December 16, 1996 (the most recent time when significant groundwater was measured in the on-site alluvial wells). It pinches out to the south (as indicated by dry wells MW-4, WCC-1, WCC-2, and MW-5) before reaching the proposed landfill footprint. WCC (1995) concluded that groundwater within the alluvium forms an unconfined aquifer recharged by direct infiltration from precipitation or runoff from the bedrock ridges east and west of the canyon, and by underflow through weathered bedrock. The available data suggest groundwater flow is to the north, under a gradient of about 0.045 ft/ft.

As stated above, the reported hydraulic conductivities for alluvium in the Pala Basin range from 750 to 1,000 gpd/ft^2 (Moreland 1974). In contrast to the more coarse-grained sediment typical of the Pala Basin as a whole, WCC (1995) estimated that the hydraulic conductivity of alluvial and colluvial materials in Gregory Canyon ranges between 0.9 and 16 gpd/ft^2. Supporting this lower local value, Geraghty & Miller (1990) performed a pumping test in well GMW-3 and estimated the transmissivity of the alluvial aquifer using the Cooper-Jacob method, at 700 gpd/ft, and from this value the hydraulic conductivity was estimated to be approximately 1.47 ft/day (11 gpd/ft^2).

Bedrock Aquifer. There are 19 bedrock monitoring wells within the proposed landfill footprint and along the periphery of the site, constructed during various investigative phases of the project (Figure 2-3B). Studies conducted to date indicate that groundwater in Gregory Canyon can be characterized as a fracture-controlled, interconnected flow system. This fracture-controlled groundwater communicates with, and recharges the alluvial water in the San Luis Rey River valley (Pala Basin). The fractured bedrock flow system can be differentiated into an upper zone of active flow through a network of interconnected fractures and weathered rock, and a deeper zone of relatively low flow through more widely spaced fractures. Boreholes drilled within the canyon itself encountered tonalite with various degrees of hydrothermal alteration, and significant fracturing in the upper 50 to 100 feet. Water-bearing fractures become sparse at depths greater than 100 feet. A synopsis of the results of studies performed by GLA supporting these conclusions is provided below.

Wells accessing the water-bearing fractures register water levels defining a systematic piezometric surface (Figure 2-3B; Plate 2). The piezometric surface reflects the main elements of the topography and illustrates the role of Gregory Mountain as the principal recharge area of Gregory Canyon. Derivation of a piezometric surface from wells isolated from one another by non-water bearing rock attests to the hydraulic interconnection of the fracture system.

2.2.2 Hydrophysical Logging Results

As shown on Plate 2, site groundwater investigation wells include thirteen wells and piezometers installed into alluvium and/or bedrock by previous consultants, an initial nine bedrock borings drilled by GLA (GLA-1 through -5 and GLA-7 through -10; proposed well GLA-6 was found to be an undrillable location), and an additional six alluvial and/or bedrock groundwater monitoring wells to further characterize the site and supplement the proposed groundwater monitoring system. The initial nine GLA borehole locations were selected based on geophysical very low frequency (VLF) anomalies, inferred structural lineaments, prominent geologic or topographic features (GLA, 1997).

Borehole Imaging. Wells that were completed in the crystalline bedrock were completed with an open hole (no filter pack or imported screen) allowing the well to be tested using various geophysical tools. A total of 14 of these boreholes were logged with an optical borehole imaging probe (BIP) by COLOG, Inc of Golden, Colorado. This technique is based on direct optical observation of the wall of the borehole and is recorded on videotape for viewing. Based on inspection of the BIP log each fracture is identified with a depth, orientation, and fracture ranking from 0 to 5, with a 0 indicating a closed feature, and 5 indicating a wide aperture fracture or

fracture zone. Most of the fractures rank from 0 to 2, with only 20 cracks ranked at 3 and only two fractures ranked at 4 (GLA, 1997). A well by well summary of the BIP log data is provided in the Hydrogeologic Investigation Report by GLA (1997) along with a discussion of the cumulative results of fracture strike orientation and dip angles plotted for all of the tested wells. Structural orientation and spatial distribution patterns of fractures in boreholes were consistent with the analysis of similar outcrop data (Section 1.3.2).

Despite the relative abundance of fractures observed in boreholes, few were ultimately correlated with groundwater flow (see below). As suggested by the ranking survey noted above, and by close examination of the borehole videotapes, most fractures are closed with no discernible aperture, or they are filled with mineralization. Fractures in the latter category are vein-like features with no apparent porosity. Some small igneous dikes and large mineral veins related to plutonic processes have been counted as fractures in several boreholes. These features are not water bearing, and would not change the results of the borehole survey were they accounted for. Therefore, from the surface and subsurface fracture observations, it is concluded that while fracture density is significantly high in the bedrock, generally secondary porosity in the water-bearing zone is probably very low.

Borehole Dilution Testing. To determine the transmissive intervals within boreholes, COLOG, Inc. (GLA, 1997) adapted the borehole dilution method, using de-ionized water as the tracer and periodic measurements of the ambient temperature and fluid electric conductivity (FEC) as measures of "concentration" of the tracer. Once borehole water has been diluted with the deionized water to reduce the FEC and create thermal equilibrium, changes in the temperature and the FEC assist in locating hydraulically transmissive zones in the bedrock, and calculating the average velocity of the groundwater moving from these zones into the open borehole. The results obtained by COLOG, Inc. after applying this technique in the logging of 11 wells are summarized below.

1. As shown in the following table, in shallow wells (e.g., GMW-1, GMW-4, and GMP-2), and in the shallow portions of wells GLA-5 and GLA-7, the transmissive intervals are broad and continuous, consistent with the deeply weathered nature of the tonalite, which for all practical purposes behaves as a silty sand.

Well	Depth to water (feet)	Depth of transmissive interval (feet)	"Saturated" interval (feet)	Percent of "saturated" interval	Specific discharge (ft/day)
GMW-1	21.89	65-83	68	NA[a]	0.26-0.31
GMW-4	65.72	66-74	50	NA[a]	0.11-0.13
GMP-2	69.54	70-86	18	NA[a]	0.14-0.18
GLA-5	42.57	43-66	147	16%	0.05
GLA-7	34.82	35-72	125	30%	0.16-0.24

Note:
a. The "saturated" section of this borehole is within heavily weathered tonalite, and is too short to allow for a meaningful percentage comparison with deeper, unweathered tonalite.

2. As shown in the following table, in the deeper portion of the GLA wells, where the tonalite is less weathered, there are very few transmissive intervals. They range in thickness between 2 and 8 feet, and represent between 1% and 5% of the total length of the bedrock section. These results are indicative of fracture flow.

Well	Depth to water (feet)	Depth of transmissive interval (feet)	"Saturated" interval (feet)	Percent of "saturated" interval	Specific discharge (ft/day)
GLA-1	37.10	ND	263	NA	ND
GLA-2	69.73	83-85	180	1.1%	0.17
GLA-3	23.84	66-70, 82-84	126	3.2%	0.23/ 0.29
GLA-4	68*	70-72, 126-134	172*	1.2%/4.7%	0.03/0.07
GLA-5	42.57	96-99	147	2.0%	0.06
GLA-8	62.40	175-180	238	2.1%	--
GLA-10	22.20	58-64	128	4.6%	0.02

Note:
* The static depth to water was 149.93 feet bgs, but the transmissivity of the well was so low that water added during testing did not drain. Thus, the reported transmissive intervals and specific discharge values are transient.

3. For the deep GLA wells, in all but one instance the intervals of groundwater flow are within 60 feet of the piezometric surface. Groundwater flow is largely concentrated in discrete shallow fracture zones. Deeper fractures possess lower transmissivity, apparently as a result of more complete mineralization.

Assuming that the porosity of the deeper intervals is 1% and that specific discharge values calculated for the deeper transmissive intervals range between 0.02 and 0.3 ft/day, the equivalent specific discharge would be between 0.0002 and 0.003 ft/day. Using an average groundwater gradient value of 0.15 ft/ft, determined from the contour map of the piezometric surface, the hydraulic conductivity would range between 0.0013 and 0.02 ft/day (4.6E-07 cm/sec to 7.1E-06 cm/sec).

Packer testing estimates of the hydraulic conductivity of the deeply weathered bedrock ranged from 0.03 to 0.3 ft/day (10^{-5} to 10^{-4} cm/sec) (Geraghty & Miller, 1990).

Cross-hole aquifer tests. COLOG, Inc. also performed three cross-hole aquifer tests to quantitatively assess the interconnectivity of the bedrock aquifer, using the following well pairs:

Pumping well	Observation well	Distance between wells	General location in the canyon
GMW-1	GLA-3	51 feet N36E	Lower reach
GMP-2	GLA-7	167 feet N56W	Middle reach
GMW-4	GLA-8	30 feet N10E	Upper reach

For cross-hole flow assessment, the formation water in the observation well is replaced with deionized water (DI) while the nearby well is pumped. As pumping continues, a series of FEC and temperature logs are then run in the observation well to identify changes in the fluid conductivity as a result of fluid flow. In effect, formation water coming into the observation well "enriches" the electric conductivity of the DI "tracer" so that inflow velocities can be estimated through the borehole dilution method discussed above.

The hydraulic connection between the pumping and observation wells is estimated by comparing the flow conditions in the observation well under ambient flow conditions (discussed above) and under cross-hole pumping conditions. By comparing the horizontal flow velocities of transmissive intervals under these two different pressure states, a qualitative evaluation of which intervals are hydraulically connected can be achieved. Using this technique, those intervals that display change in flow between the two pressure conditions can be assumed to be hydraulically connected.

For the cross-hole test in which GMW-1 was the pumping well and GLA-3 was the observation well, COLOG concluded that significant change occurred at three distinct depth intervals within GLA-3 – 48 to 56 feet, 66 to 68 feet, and 82 to 84 feet. In effect, these intervals experienced flow created by the stress imposed by pumping. The data yielded a specific discharge in the aquifer of 0.37, 0.28, and 0.50 ft/day, respectively. The interval from 48 to 56 feet had negligible horizontal flow under ambient conditions, and therefore, had the greatest change during cross-hole pumping conditions. The interval of 66 to 68 feet experienced an increase of 22% with respect to the ambient flow condition. Finally, the interval from 82 to 84 feet experienced a 72% increase in the average flow velocity with respect to the ambient flow condition. For this well pair, then, the "capture radius" extends at least 51 feet in the horizontal direction and 60 feet vertically into the aquifer (i.e., the distance between the depth of the piezometric surface [24 feet] and the depth of the 82-84 feet transmissive interval).

For the cross-hole test in which GMP-2 was the pumping well and GLA-7 was the observation well, COLOG concluded that significant change occurred at numerous zones over the interval from 34 to 91 feet. To discretize the specific intervals for horizontal flow analysis, the results of the ambient and cross-hole tests were evaluated in the following discrete intervals between 33 and 94 feet: 33-42 feet, 42-48 feet, 48-52 feet, 52-58 feet, 58-62 feet, 62-69 feet, 69-72 feet, 72-76 feet, 76-79 feet, 79-88 feet, and 88-94 feet. The resulting data yielded specific discharges in the aquifer of 0.24 to 0.42 ft/day. The intervals between 33 and 62 feet experienced increases in horizontal flow velocity of 13% to 79%, while the intervals at 62 to 69 and 69 to 72 feet displayed a 102% and 146% increase, respectively. The intervals between 72 and 94 feet did not display observable horizontal flow under ambient flow conditions, but were "opened" by the stress imposed by pumping. In summary, the data suggest that the intervals from 33 to 72 feet in well GLA-7 have a significant hydraulic connection to pumping well GMP-2. For this well pair, then, the "capture radius" extends at least 167 feet in the horizontal direction and 60 feet vertically into the aquifer (i.e., the distance between the depth of the piezometric surface, 35 feet, and the lower-bound depth of the transmissive interval, 94 feet).

For the cross-hole test in which GMW-4 was the pumping well and GLA-8 was the observation well, COLOG concluded that significant change occurred at numerous zones over the interval from 70 to 90 feet, and at a discrete interval at a depth of 178 to 182 feet. The results of the cross-hole test for the 70 to 90 feet inflow zone were evaluated as four discrete intervals – 70-75, 75-80, 80-85, and 85-90 feet. These data yield a range in specific discharge in the aquifer from 0.27 to 0.29 ft/day (this same interval was a zone of outflow from the borehole under ambient flow conditions, so calculation of a percent increase rate in flow is not meaningful). The inflow at the 178 to 182 feet interval under cross-hole pumping conditions was 19% larger than under ambient flow conditions. These data suggest that the "capture radius" of this well pair extends at least 30 feet in the horizontal direction and 120 feet vertically into the aquifer (i.e., the distance between the depth of the piezometric surface, 62 feet, and the lower-bound depth of the lower transmissive interval, 182 feet).

As stated above, all three cross-hole tests documented hydraulic connectivity between the pumping and the observation wells. Based on the 167-foot capture radius documented by the pair GMP-2/ GLA-7, an initial assumption of monitoring wells spaced at an average spacing of 300 feet may be reasonably expected to detect potential groundwater impacts under the proposed landfill. However, additional cross-hole testing would be performed in the dedicated monitoring wells to confirm the extent of their capture zones, and the spacing between the wells reduced or extended based on the pumping test data.

2.2.3 Groundwater Pumping Tests

To further characterize the hydraulic properties of the bedrock aquifer, GLA conducted two pumping tests in November and December 2000 (GLA, 2001). The first test was performed at the toe of the canyon, pumping in well GLA-3 over a period of 27 hours at a constant rate of 10 gpm, while measuring changes in drawdown in observation wells GMW-1 (51 feet away) and GLA-13 (200 feet away). The second test was conducted further up the canyon in fractured bedrock below the zone of weathering, pumping from well GLA-8 over a period of 24 hours while observing drawdown in well GMW-4, located 21 feet away. A summary of the pumping test results is provided in Table 2-2 and the pumping test data is provided in Attachment 4.

Results from the first pumping test at well GLA-3 indicate that while pumping at 10 gallons per minute (gpm), approximately 9 feet of drawdown was observed in the pumping well GLA-3. Drawdown of nearly 5 feet and 2 feet was measured in the observation wells GMW-1 (at a distance of 51 feet) and GLA-13 (at a distance of 200 feet), respectively. As a result, it is concluded that the wells are in hydraulic communication to a distance of at least 200 feet (to GLA-13), and distance-drawdown analysis indicated an effective radius of influence of approximately 1000 feet from well GLA-3. Average hydraulic conductivities of 2.6E-03 ft/min (1.3E-03 cm/sec) and 4.6E-03 ft/min (2.3E-03 cm/sec) were calculated and used to derive transmissivity values of between 9.5E-02 ft^2/min (1023 gpd/ft) to 2.8E-01 ft^2/min (3016 gpd/ft) from the first pumping test.

Results for the second pumping test at well GLA-8 also showed that these wells are in hydraulic communication through unweathered bedrock. Hydraulic conductivities for well GLA-8 were approximately 6.8E-05 ft/min (3.1E-05 cm/sec) for earlier pumping times and 1.1E-05 ft/min (5.6E-06 cm/sec) for longer times. Similar hydraulic conductivities were calculated for well GWM-4 of 3.4E-04 ft/min (1.7E-04 cm/sec) and 2.1E-04 ft/min (1.07E-04 cm/sec), respectively. Distance-drawdown analysis indicated an effective radius of influence of 250 feet from well GLA-8 when pumping at 2 gpm. Using the calculated hydraulic conductivity values and aquifer thickness estimates, early and late transmissivity values range from 1.2E-02 ft^2/min (129 gpd/ft) to 8.7E-04 ft^2/min (9 gpd/ft).

The lower hydraulic conductivity values obtained from the second pumping test reflect testing within the unweathered, fractured bedrock compared with the first pumping test performed at the toe of the canyon where there is a thicker weathered bedrock below alluvial/colluvial portions of the aquifer that may be recharging the underlying fractured bedrock.

2.3 CONFIGURATION OF THE WATER TABLE (PIEZOMETRIC SURFACE)

Both a water table and a piezometric surface describe the occurrence of groundwater in Gregory Canyon. A piezometric surface represents the hydrostatic pressure head above any point in the subsurface. The 'dry well' shown in Figure 2-5 illustrates the case where no water-bearing fractures are encountered in the screened interval, thus no water is produced in the well, although the well access does lie below the piezometric surface. Therefore, a dry well could indicate that the piezometric level is below the bottom of the well, or it indicates that the borehole did not intersect open fractures (as identified at well GLA-9).

Figure 2-3A shows a contour map of the water table in the alluvial aquifer based on data collected on 12/16/96. This aquifer likely merges with the San Luis Rey alluvial aquifer to the north. Groundwater flow is to the north, under a gradient of about 0.045 ft/ft. Figure 2-3B and Plate 2 present a contour map of the piezometric surface in the bedrock aquifer based on the data from March 2000. Water level measurements recorded for these wells through March 2002 indicate similar configurations of the water table and piezometric surface over time (Table 2-20).

Figure 2-5 presents a qualitative model of the relationship between the alluvial aquifer water table and the bedrock piezometric surface of groundwater flow system; a system in fractured bedrock that is subparellel to the slope gradient. The fracture-controlled groundwater communicates with, and recharges the alluvial water table, which ultimately communicates with the San Luis Rey River valley. The fractured bedrock flow system can be arbitrarily differentiated into an upper zone of flow through a network of interconnected fractures, and a deeper zone of relatively lower flow resulting from more widely spaced fractures.

Using standard contouring and hydrogeologic procedures, the available data suggest northerly groundwater flow dominated by recharge from Gregory Mountain (Figure 2-3B and Plate 2). In the upper reaches of the canyon the gradient is about 0.2 ft/ft to the north. The gradient becomes shallower toward the mouth of the canyon (about 0.1 ft/ft to the north).

Data obtained on September 13, 1999, quarterly in 2000 and monthly in 2001 indicate very little fluctuation in groundwater elevations in wells and as a result, it is concluded that the fractured-rock aquifer piezometric surface is consistent over time and is thus predictable.

Because the landfill excavation will be a minimum of five-feet above the highest anticipated groundwater piezometric surface elevation, the excavation for the landfill will not affect the direction of groundwater flow. Though the landfill is designed above the historical piezometric surface, a subdrain system will still be constructed below the landfill in the unlikely event of a higher than anticipated increase in groundwater elevation. Subdrain design in discussed in more detail in Section 3.1.1, below.

Groundwater recharge could decrease slightly once the landfill is constructed, because the liner system will effectively eliminate infiltration over the footprint area. Assuming a conservative infiltration rate of 1.6 inches per year (about 10 percent of precipitation), it is calculated that this could result in an average decrease in groundwater recharge of 2,960 ft^3/day (about 15 gpm) or 25 acre-feet per year across the site following landfill completion (GLA, 1997).

2.4 GROUNDWATER QUALITY

As described in Section 2.1 above, the project site includes existing agricultural, dairy and cattle grazing uses. Problems associated with dairy operations in the San Diego region include groundwater mineralization, the addition of nitrates to groundwater, surface runoff of biodegradable and suspended material, nuisance odors, the addition of nutrients to adjacent surface water streams and other miscellaneous problems. As a result of historical land uses on the property, agricultural irrigation return water is a major on-site influence on groundwater quality. Agricultural return water is the wastewater which runs off or leaches through an irrigated area and the two major concerns with this water are salt loading and the release of applied chemicals. Since the water supply in the San Diego region is already quite high in salts and the climate is dry, irrigation generally results in salt accumulation in soil. If these salts are not leached out by regularly applying more irrigation water than is needed for evapotranspiration, salts accumulate in the root zone and the land eventually becomes too salty for agriculture. Though saline soils can often be reclaimed by leaching, the percolation of the leach water can result in significant groundwater degradation.

Modern agriculture often relies on extensive use of applied chemicals such as fertilizers, pesticides and herbicides to obtain high crop yields. The release of applied chemicals into surface and groundwater can have adverse effects on the quality of those waters and the beneficial uses supported by them. The application of agricultural chemicals, in some cases, has been linked directly to aquatic toxicity and is suspect in many impaired water bodies. In addition to degradation of the aquatic environment, the contamination of ground and surface waters by pesticides and fertilizers is believed to also pose a threat to human health.

Hanson's sand and gravel quarry is located northeast of the project site. The largest volume of waste from sand and gravel processing operations results from product washing. Many of the sedimentary deposits mined for sand and gravel in the San Diego region contain a high

percentage of silt and clay, and extensive washing is required to remove these fine materials. Other waste includes cement truck wash water, sediment separated from the wash water, and rejected product. Recycled wash waters are generally discharged to storage ponds and can contain high concentrations of TDS because of evaporation and leaching from product materials. The percolation of these recycled waters can also adversely affect groundwater quality.

2.4.1 Groundwater Monitoring Results

Initial Water Quality Sampling

In the course of performing the hydrogeologic evaluation for the site, GLA performed a limited water quality evaluation in August 1999. On-site monitoring wells, local residential/production wells and the San Luis Rey River were used to assess the current groundwater quality in the vicinity of the project site. Specifically, samples were obtained from upgradient monitoring wells GLA-4 and GLA-5 and downgradient wells GLA-2, GLA-7 and GLA-10 (Figure 2-3B). Three residential/production wells identified as Residential wells 2, 3 and 4, were also sampled within the San Luis Rey River valley (Figure 2-7). Residential well 2 is located on the west side of the project site near the Verboom residence, Residential well 3 coincides with the SLRMWD well #34, and Residential well 4 (Lucio well #2) is located on the north side of the river on the former Lucio Family Dairy property. The samples were analyzed for the indicator parameters (chloride, nitrate as nitrogen, pH, sulfate, total dissolved solids and volatile organic compounds ([VOCs] by EPA Method 8260). The results of this water quality evaluation are summarized below, and a summary of the water quality analytical data is provided in Table 2-3. Copies of the analytical reports are provided in Attachment 3.

TDS in groundwater samples collected from wells during the August 1999 sampling event ranged from 444 to 992 mg/l. Nitrate as nitrogen concentrations ranged from 0.077 mg/l to 26.2 mg/l. Only the TDS in the groundwater sample from upgradient well GLA-4 (444 mg/l) actually was below the state recommended maximum contaminant level (MCL) of 500 mg/l for drinking water and beneficial groundwater use designation (RWQCB 1994). It should be noted that water delivered by the SDCWA and its member agencies to users throughout the county has typical TDS concentrations ranging between 500 and 700 mg/l, so with respect to this parameter the groundwater resource at Gregory Canyon can be considered typical of San Diego County. Samples collected from upgradient well GLA-5 contained concentrations of nitrate as nitrogen (16.6 mg/l) and sulfate (306 mg/l); both above state recommended MCLs of 10 mg/l and 250 mg/l, respectively (although for sulfate the state provides an upper limit of 500 mg/l under the secondary MCLs). Downgradient well GLA-2 contained the highest concentrations of nitrate as nitrogen (26.2 mg/l) and also exceeded the state and federal MCLs for this constituent. Based on a review of these 1999 groundwater quality data, these results are generally consistent with those obtained from earlier water quality studies (WCC, 1995) and suggest some nitrate impacts locally, likely related to the agricultural/dairy uses of the property.

During the initial August 1999 water quality investigation, a few volatile organic compounds were detected in the water quality samples. The sample from downgradient well GLA-2 contained estimated trace concentrations (i.e., between the laboratory method detection limits

and the laboratory reporting limits) of acetone (4.3 micrograms per liter [µg/l]), toluene (0.52 µg/l) and p+m-xylenes (0.69 µg/l). Acetone was also detected in samples from Residential well 4, and the upgradient surface water sample. Acetone is a common solvent used in analytical laboratories and is a likely laboratory contaminant. Toluene and the xylene isomers are commonly associated with gasoline. The measured concentrations of toluene and xylenes are well below state primary MCLs of 150 µg/l and 1750 µg/l, respectively, and although they may suggest low level gasoline impacts, they could also be the result of field- or laboratory-introduced contaminants. Finally, chloroform was measured at a concentration of 1.2 µg/l in the sample from Residential well 4. Since chloroform is used in analytical laboratories and is a common constituent in treated drinking water, it too is a suspected laboratory- or field-introduced contaminant.

Background Water Quality Sampling

In accordance with CCR 27 Section 20415(e)(6), GLA obtained four quarters of groundwater and surface water data from the proposed background monitoring points and wells downgradient of the proposed landfill site to evaluate background water quality values between December 2000 and December 2001. The sampling program included collection of samples from the bedrock aquifer in upgradient (background) wells GLA-4, GLA-5, and GLA-11, and downgradient (point-of-compliance) wells GLA-2, GLA-10, GLA-12, GLA-13, and GLA-14, and from the alluvial aquifer in background (upgradient) well Lucio #2, and downgradient alluvial wells GLA-16, and SLRMWD designated well #34. Samples collected from each of these wells were analyzed for the full suite of constituents of concern (COCs) provided in the Code of Federal Regulations (40 CFR Part 258, Appendix II). Included in this list of compounds are cyanide, sulfide, 20 metals, VOCs, semivolatile organic compounds (SVOCs), chlorinated herbicides, pesticides and polychlorinated biphenyls (PCBs). In addition, samples were submitted for indicator parameters including chloride, nitrate, sulfate, pH, and TDS. Summaries of the analytical results obtained for each groundwater monitoring well are provided on Tables 2-4 through 2-14 and Tables 2-15 and 2-16 present a comparison of the median concentrations of inorganic constituents in groundwater obtained from August 1999 (if available) and the subsequent four sampling rounds. These tables also present the detected organic compounds (averaged when a constituent was detected more than one time) for bedrock aquifer and alluvial aquifer samples, respectively. Copies of the analytical reports are provided in Attachment 3.

In evaluating general water quality, the median values for each constituent were compared with currently established state and federal MCLs and San Diego RWQCB Basin Objectives. Review of the median data indicates similar water quality to the data obtained earlier with concentrations of chloride, TDS and nitrate in some bedrock wells above the upper state MCL, while water quality in the alluvial wells was found to meet state and federal MCLs and the local basin objectives. The following table presents those median concentrations that were found to equal or exceed a currently established state or federal MCL or basin objective.

Bedrock Aquifer Well Exceedances
MCL versus Median Concentration

CONSTITUENT	STANDARD	UPGRADIENT LOCATIONS			DOWNGRADIENT LOCATIONS				
General Chemistry (mg/L):		GLA-4	GLA-5	GLA-11	GLA-2	GLA-10	GLA-12	GLA-13	GLA-14
Chloride	300[4] / 500[1,3]	NA	NA	NA	450	NA	NA	NA	NA
Nitrate	15[4] / 45[1,3]	NA	18.8	NA	42.9	NA	NA	28.3	15.3
Total Dissolved Solids	900[4] / 1000[2]	NA	1120	NA	1410	NA	NA	1000	NA

NOTES: 1. California Primary Drinking Water Standards.
2. California Secondary Drinking Water Standards – Upper Limit.
3. Federal Maximum Contaminant Levels.
4. Basin Objective – Pala Hydrologic Subarea.
NA – Not Applicable (No exceedance).

In the bedrock aquifer, comparison of the median data across the site indicates that samples from upgradient (background) wells GLA-4 and GLA-11 contained some of the lowest concentrations of most of the general chemistry constituents and several metals. Samples from downgradient well GLA-2 contained several general chemistry and metals at the highest concentrations in the bedrock aquifer wells. The samples from background well GLA-5, located at the head of the canyon, contained elevated concentrations of nitrate and TDS, and the highest concentrations of sulfate and barium compared with the other bedrock aquifer wells. For the alluvial aquifer, the groundwater data is relatively consistent between the three sampled wells, with slightly lower concentrations measured in SLRMWD well #34.

Review of COC data demonstrates that no pesticides or PCBs were detected in groundwater at the Gregory Canyon site, and only one chlorinated herbicide (2,4-D) was identified once and at a trace concentration in the sample from downgradient bedrock well GLA-13. In contrast, several VOCs and SVOCs were detected one or more times in the proposed groundwater monitoring system samples. The majority of the detected VOCs are either common laboratory compounds such as acetone, carbon disulfide, and chloroform, or are constituents in hydrocarbon-based fuel (such as benzene, toluene, ethylbenzene and xylenes). Review of the quality assurance/quality control (QA/QC) blank sample data obtained with the primary samples also indicates measurable VOCs in blank samples including benzene, ethylbenzene, toluene and xylenes in the equipment and field blanks. The majority of the detected SVOCs were phthalates, which are plasticizers commonly attributed to laboratory or field contamination. Because the data obtained to date suggest only sporadic detections of VOCs and SVOCs, those identified are often attributed to laboratory/field-introduced impacts, and there are few on-site sources for these compounds, laboratory or field contamination is suspected. This conclusion will be confirmed during future quarterly sampling events (scheduled to begin following construction and testing of the groundwater monitoring network to be completed in the spring 2004) to obtain a representative database (approximately 16 data points) of background water quality data prior to and during development of the landfill. The monitoring program will include collection of samples from existing bedrock monitoring wells GLA-2, GLA-4, GLA-5, GLA-11, GLA–12, GLA-13, GLA-14, and GWM-1 (also added for additional point of compliance coverage), additional proposed monitoring wells scheduled to be constructed in the spring 2004 (e.g., GLA-A, GLA-B, GLA-C, GLA-D, GLA-3S and GLA-17); existing alluvial well GMW-3, and to be constructed replacement alluvial wells Lucio #2R and SLRMWD#34R; and the surface water sampling points that contain sufficient water. The samples will be tested for the 40 CFR 258 Appendix I list of constituents, excluding metals but including the metal surrogates, calcium, magnesium and

sodium. Because the site is located in an agricultural land use area, the samples will also be tested for chlorinated herbicides and pesticides. A discussion of this program is also provided in the Monitoring and Reporting Plan developed specifically for the Gregory Canyon Landfill.

2.4.2 Surface Water Monitoring Results

In addition to groundwater samples, surface water samples were collected in the San Luis Rey River from surface water stations SLRSW-1 (upstream of Gregory Canyon) and SLRSW-2 (downstream of Gregory Canyon). The samples were also analyzed for the full suite of COCs listed within 40 CFR 258, Appendix II, along with the metal surrogates chloride, nitrate, sulfate, pH, and TDS. Summaries of the analytical results obtained for each surface water monitoring station are provided on Tables 2-17 and 2-18. Table 2-19 presents a comparison of the median surface water sample concentrations obtained from August 1999 and four sampling rounds for inorganic constituents and presents the detected organic compounds (averaged when a constituent was detected more than one time). Copies of the analytical reports are provided in Attachment 3.

Comparison of the surface water sample data with currently established state and federal MCLs and surface water basin objectives indicates that only the median TDS concentrations in both surface water samples exceeded the basin objective. Further review of the data indicated very little difference between the median values up and downstream of the canyon. This finding is not surprising considering the relatively undisturbed nature of the area.

2.4.3 Analysis of Potential Impairment to Groundwater

The alluvial valley that forms the Pala groundwater basin has an average width of 2,600 feet and a maximum depth of about 240 feet (average thickness of 150 feet). The groundwater gradient in the basin is approximately 0.004 feet/feet (horizontal displacement of 400 feet to one vertical foot), which is similar to the topographic gradient of the ground surface. Depths to water were estimated to range from less than five feet to approximately 10 feet below ground surface. The average hydraulic conductivity of the alluvial sediments was estimated to be about 80 to 100 feet/day, with higher conductivity materials in the main river channel and lower conductivity materials (8 feet/day) skirting the edges of the valley (Geraghty & Miller, 1988).

The proposed landfill will occupy one of the tributary canyons to the Pala groundwater basin. The western part of the basin is managed by the SLRMWD, which in 1995 requested an assessment of potential impacts of a leachate release from the proposed landfill on the basin. At the request of the SLRMWD, computer model simulations of groundwater flow in the Pala Basin in the vicinity of the proposed landfill were performed and a simulation of the expected groundwater flowpath from the landfill was presented (GLA, 1995). Estimated worst-case leakage from the landfill was modeled as was its affect on identified production wells within the basin. The analysis assumed that the leachate containment systems incorporated in the project design meet the minimum requirements for environmental protection mandated by U.S. and California EPAs.

Using Pala Basin hydrogeologic characterization summary input data, a two-dimensional

groundwater flow model was developed using the finite difference computer program Flowpath (Franz and Guiguer, 1992). Constituent transport modeling with the Flowpath computer program is accomplished with the use of particle tracking techniques, which simulate constituents as "particles" that follow the groundwater flowlines. Two conditions were simulated. The first simulated groundwater flow under existing conditions with a worst case leakage through the liner of about 10 gallons per day per acre (1,850 gallons per day for the 185-acre refuse disposal area of the landfill [excluding the transmission pads]) and head conditions in the Pala basin at levels approximately equal to those shown on the Geoscience (1993) hydrogeologic base map. The release is assumed to be a point source and is modeled as an injection well. The second simulation involved a lower groundwater elevation (i.e., a starved basin) approximately 20 feet below ground surface in the southwest corner of the basin, as could happen if increased pumping took place during extended drought periods.

The first model showed that steady-state groundwater flow in the Pala basin can be reasonably assumed to follow the topography, with flow lines following the general trend of the river (Figure 2-6A). Owing to slightly increased recharge in the vicinity of the river, groundwater velocities are slightly higher immediately adjacent to the trace of the river. Figure 2-6A also shows the predicted pathways of particles potentially released from the landfill. As shown, the particle pathways could extend past wells #41 and #42, and at least 2/3 of a mile from the downgradient boundary of the project property, if the release is allowed to continue under steady state conditions. It should be noted that both of these wells are still within the footprint of the property owned by Gregory Canyon Ltd. On a transient simulation, the particles would need approximately 5.5 years to travel the distance of 2,000 feet between the toe of the landfill and wells #41 and #42, at an average flow velocity of approximately one foot per day. From this point, the particle pathways extend along the southern perimeter of the canyon until the particles intercept a point of constriction within the canyon at the base of the bluff where the Verboom homestead is located. At this point the pathway merges with the underflow of the San Luis Rey River, which would conceivably then carry the particles farther downstream, if no source control were introduced.

Figure 2-6B illustrates the second groundwater flow simulation for the case where groundwater head levels have been reduced by 10 feet in the southwest part of the basin to a level approximately 20 feet below ground surface. As a result of the reduced groundwater head levels in the downgradient part of the model, a steeper groundwater gradient is induced, and slightly higher groundwater flow velocities result. Though there is a resulting change in groundwater flow velocity, the change in the trajectories of particles is very small, as demonstrated by the almost identical particle tracks calculated for the second simulation (Figure 2-6B). Under these conditions, the particles would need approximately 4.9 years to travel the 2,000 feet between the toe of the landfill and wells #41 and #42, at an average flow velocity of approximately 1.1 feet per day. This flow path scenario provides a basis for the location of monitoring wells as part of the detection monitoring program for the Gregory Canyon Landfill.

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SECTION 2.0

FIGURES

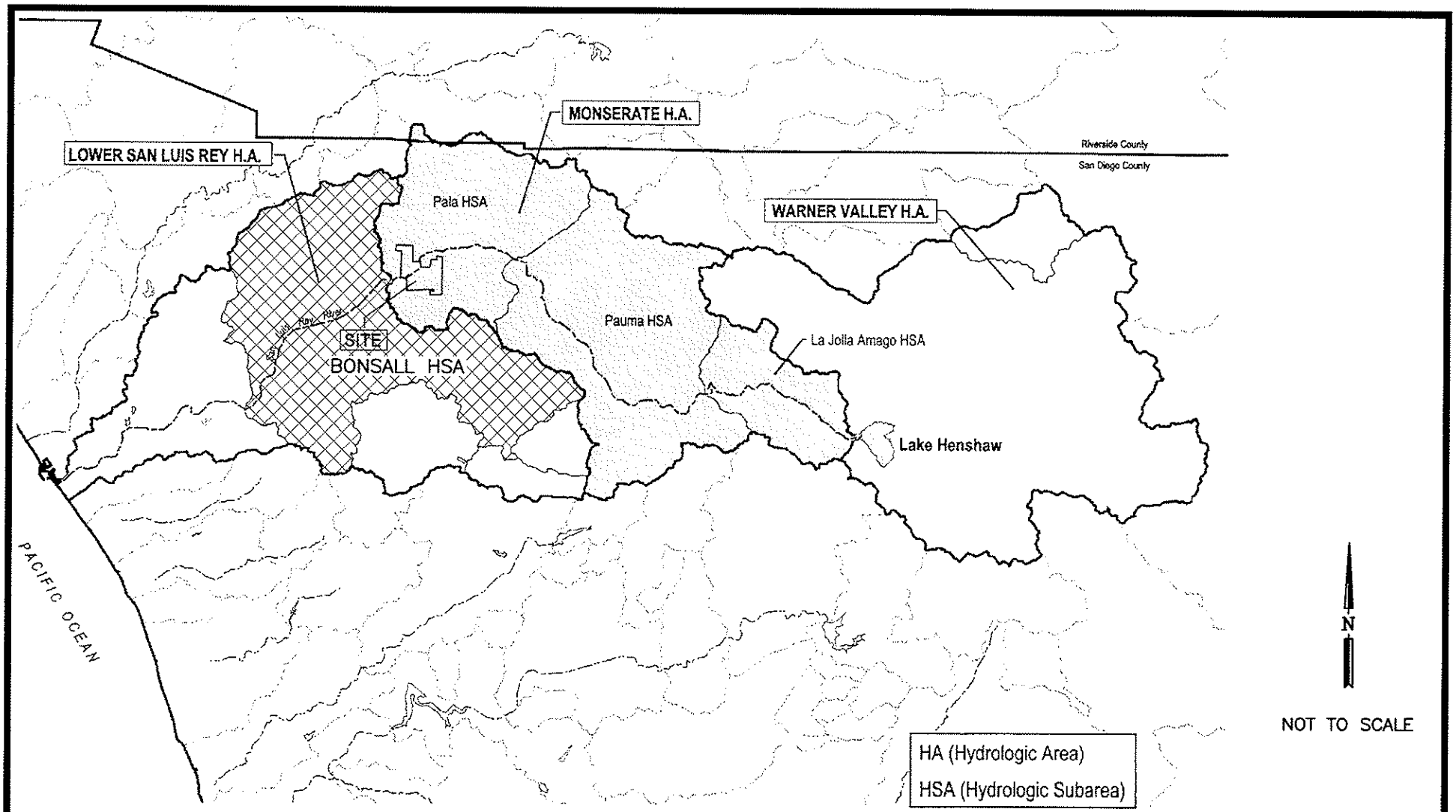


FIGURE 2–1

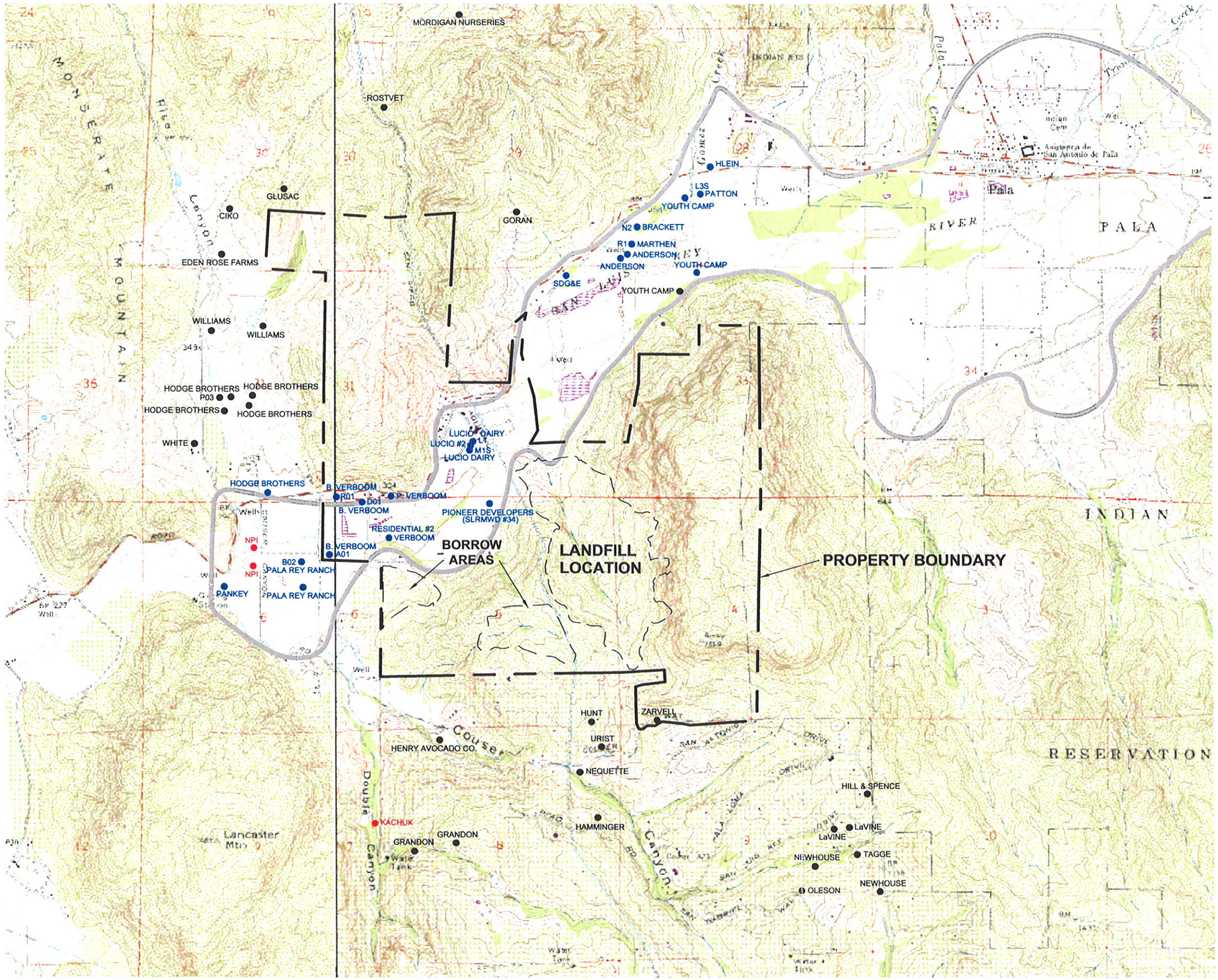
SAN LUIS REY HYDROLOGIC UNIT

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539

SOURCES:
SANDAG GIS DATA, 1997
DAVID EVANS AND ASSOCIATES, INC., 1999
PCR SERVICES CORPORATION, 1999



EXPLANATION:

WHITE ● APPROXIMATE LOCATION OF LOCAL GROUNDWATER WELL SCREENED IN BEDROCK (NOT FIELD VERIFIED)

PANKEY ● APPROXIMATE LOCATION OF LOCAL GROUNDWATER WELL SCREENED IN ALLUVIUM (NOT FIELD VERIFIED)

NPI ● APPROXIMATE LOCATION OF LOCAL GROUNDWATER WELL SCREENED IN ALLUVIUM AND BEDROCK (NOT FIELD VERIFIED)

APPROXIMATE LIMIT OF PALA BASIN

REFERENCE:

USGS 7.5 MINUTE PALA (1988) AND BONSALL (1975) CALIFORNIA QUADRANGLES

CALIFORNIA DEPARTMENT OF WATER RESOURCES WATER WELL DRILLERS REPORTS

SAN DIEGO COUNTY WATER AUTHORITY GROUNDWATER REPORT (1997)

N

APPROXIMATE SCALE: 1" = 2300'

FIGURE 2-2

KNOWN WELLS WITHIN 1 MILE RADIUS

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

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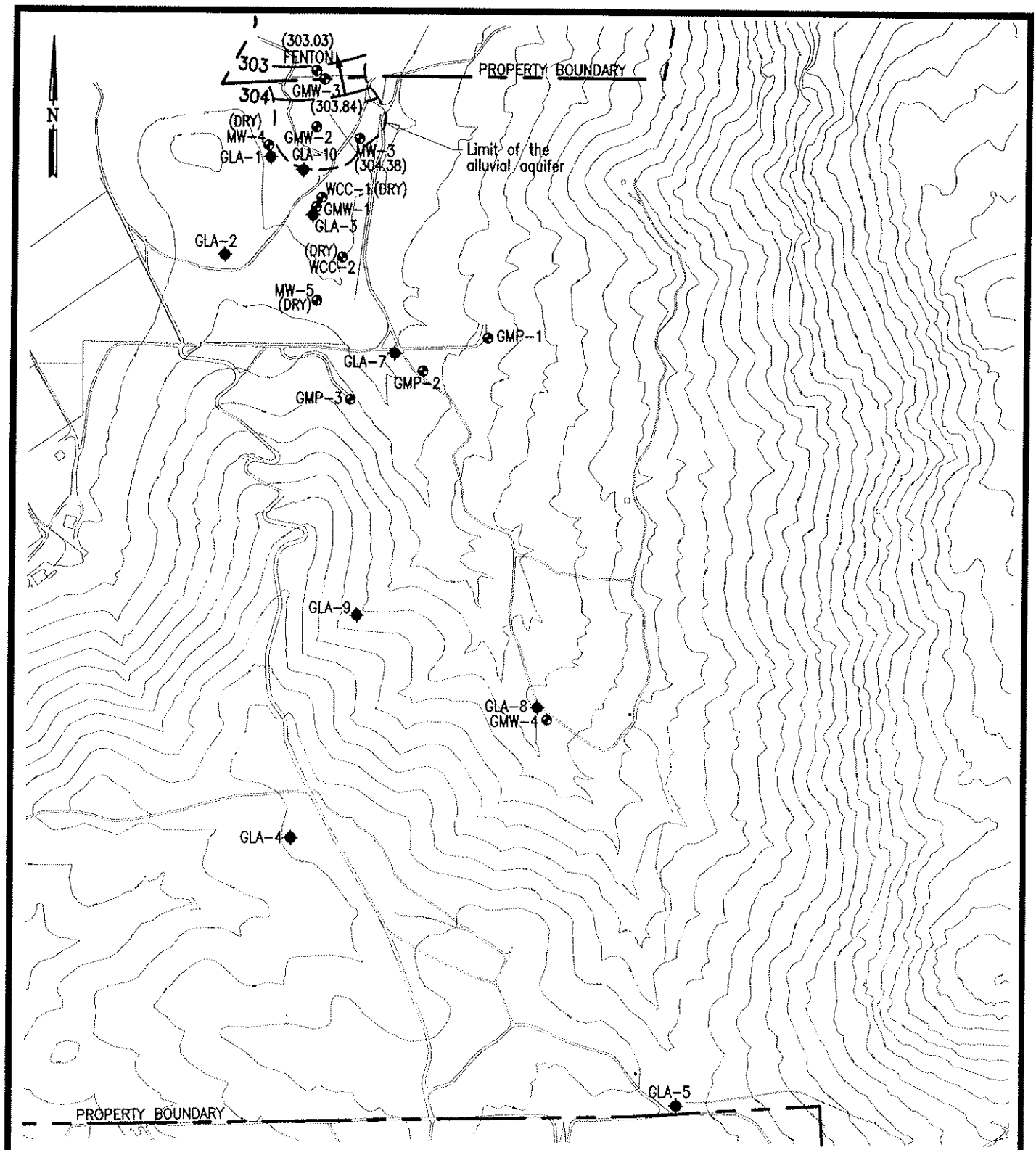

GRAPHIC SCALE

350 0 175 350 700

(in feet)

1 inch = 700 ft.

EXPLANATION:

- MONITORING WELL BY GLA
- MONITORING WELL BY OTHERS
- 304 WATER TABLE ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

FIGURE 2-3A

CONFIGURATION OF THE WATER TABLE IN THE ALLUVIAL AQUIFER ON 12/16/96

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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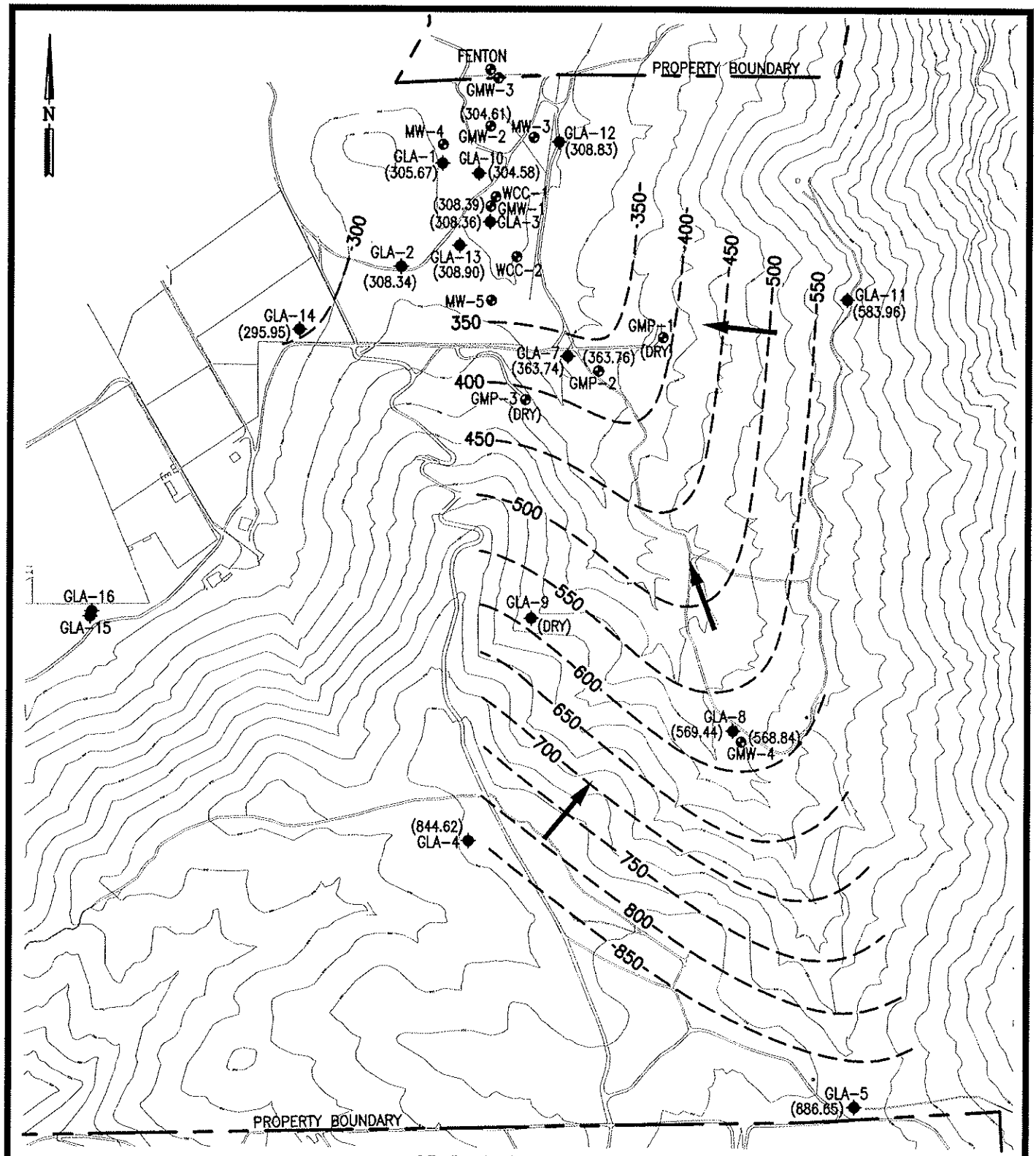

GRAPHIC SCALE

350 0 175 350 700

(in feet)

1 inch = 700 ft.

EXPLANATION:

- MONITORING WELL BY GLA
- MONITORING WELL BY OTHERS
- 750 PIEZOMETRIC SURFACE ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

FIGURE 2-3B

CONFIGURATION OF THE PIEZOMETRIC SURFACE IN THE FRACTURED BEDROCK AQUIFER ON 3/14 & 3/15/00

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
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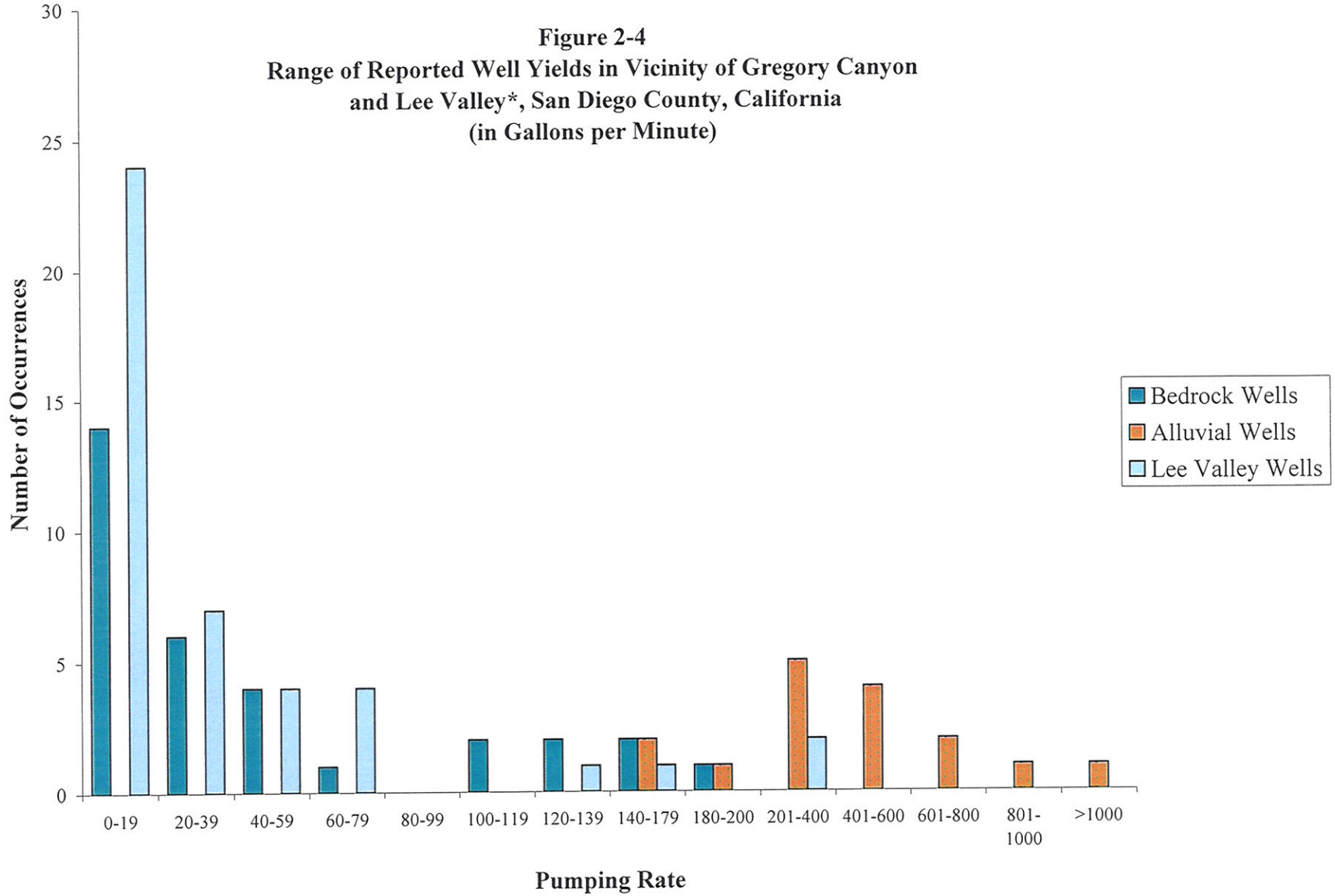
Figure 2-4
Range of Reported Well Yields in Vicinity of Gregory Canyon and Lee Valley*, San Diego County, California (in Gallons per Minute)



*From Kaehler and Hsieh, 1994, USGS Water-Supply Paper 2394.

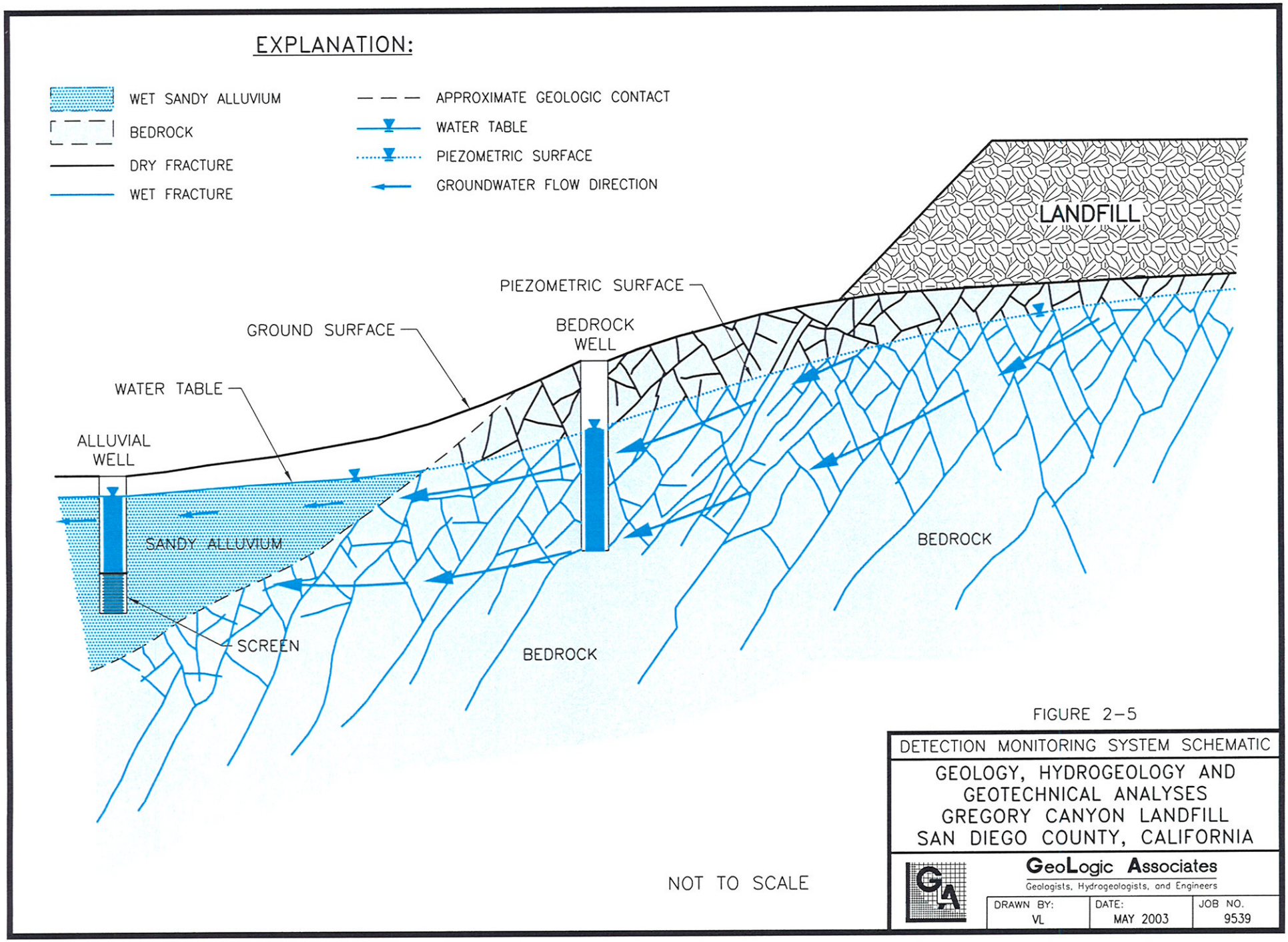


FIGURE 2-5

DETECTION MONITORING SYSTEM SCHEMATIC

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
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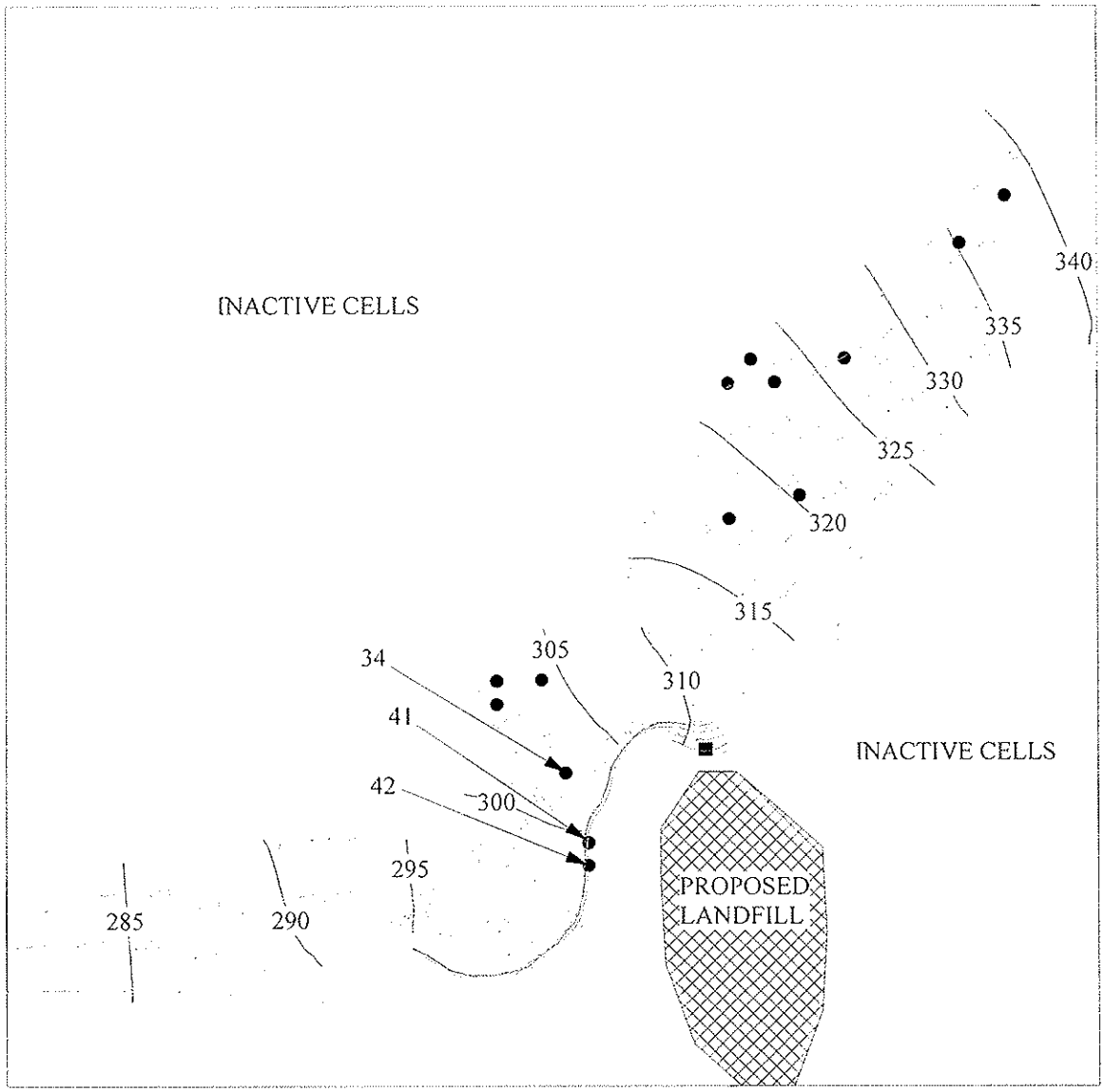

Case 1. Equipotential levels similar to the ones measured currently (approximately 10 feet lower than ground surface)

2,000 feet

- Pumping well
- Hypothetical point of release
- 315 Equipotential line (in feet amsl)
- Groundwater flow velocity vectors
- Release pathway

FIGURE 2-6A

TWO-DIMENTIONAL FLOW MODEL 1, CONTAMINANT TRANSPORT PATH (TYPICAL LEVELS)

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
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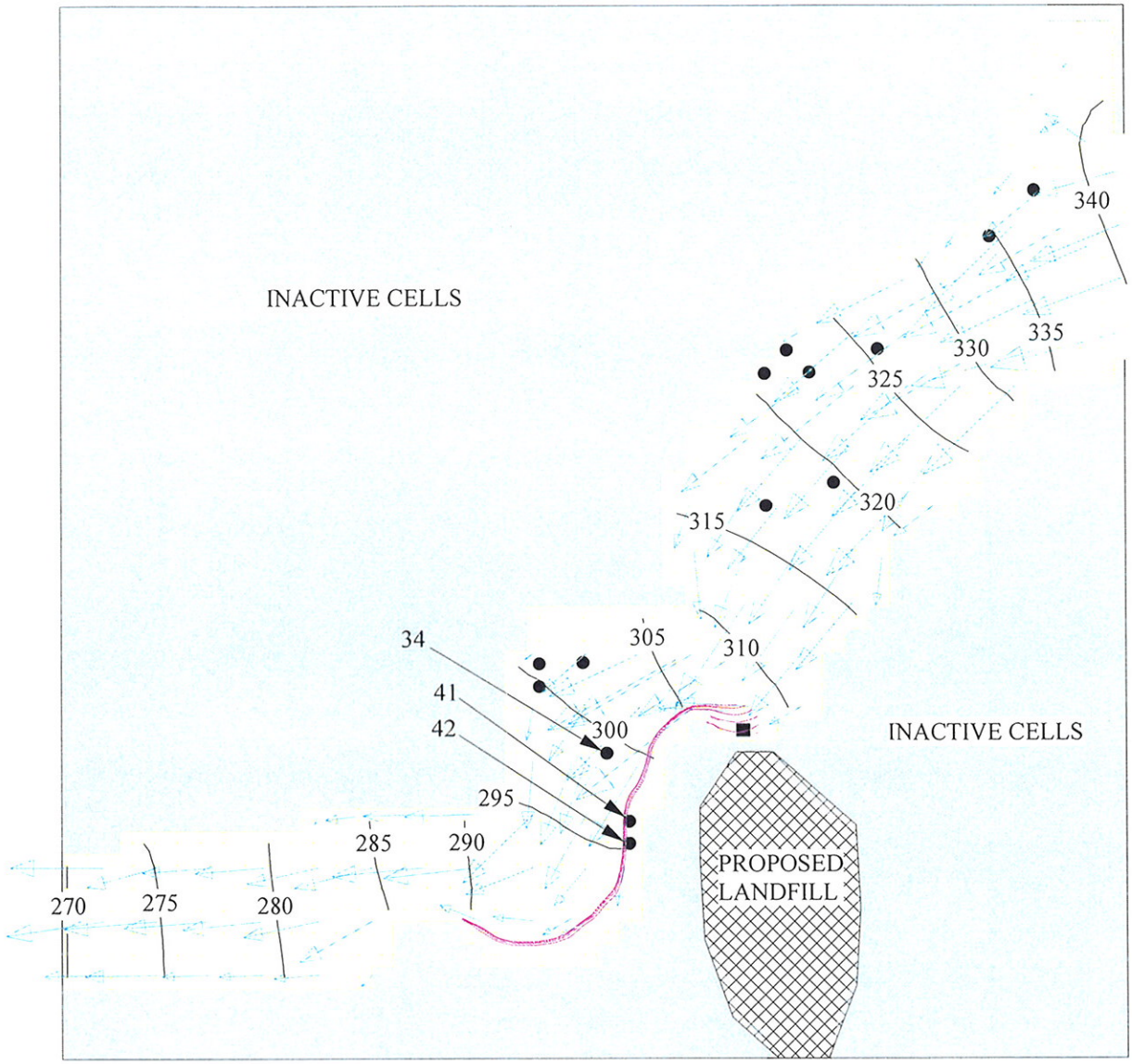

Case 2. Equipotential levels 20 feet lower than ground surface along the western edge of the model

- Pumping well
- Hypothetical point of release
- 315 Equipotential line (in feet amsl)
- Groundwater flow velocity vectors
- Release pathway

2,000 feet

FIGURE 2-6B

TWO-DIMENTIONAL FLOW MODEL 2, CONTAMINANT TRANSPORT PATH (10 FEET BELOW TYPICAL LEVELS)

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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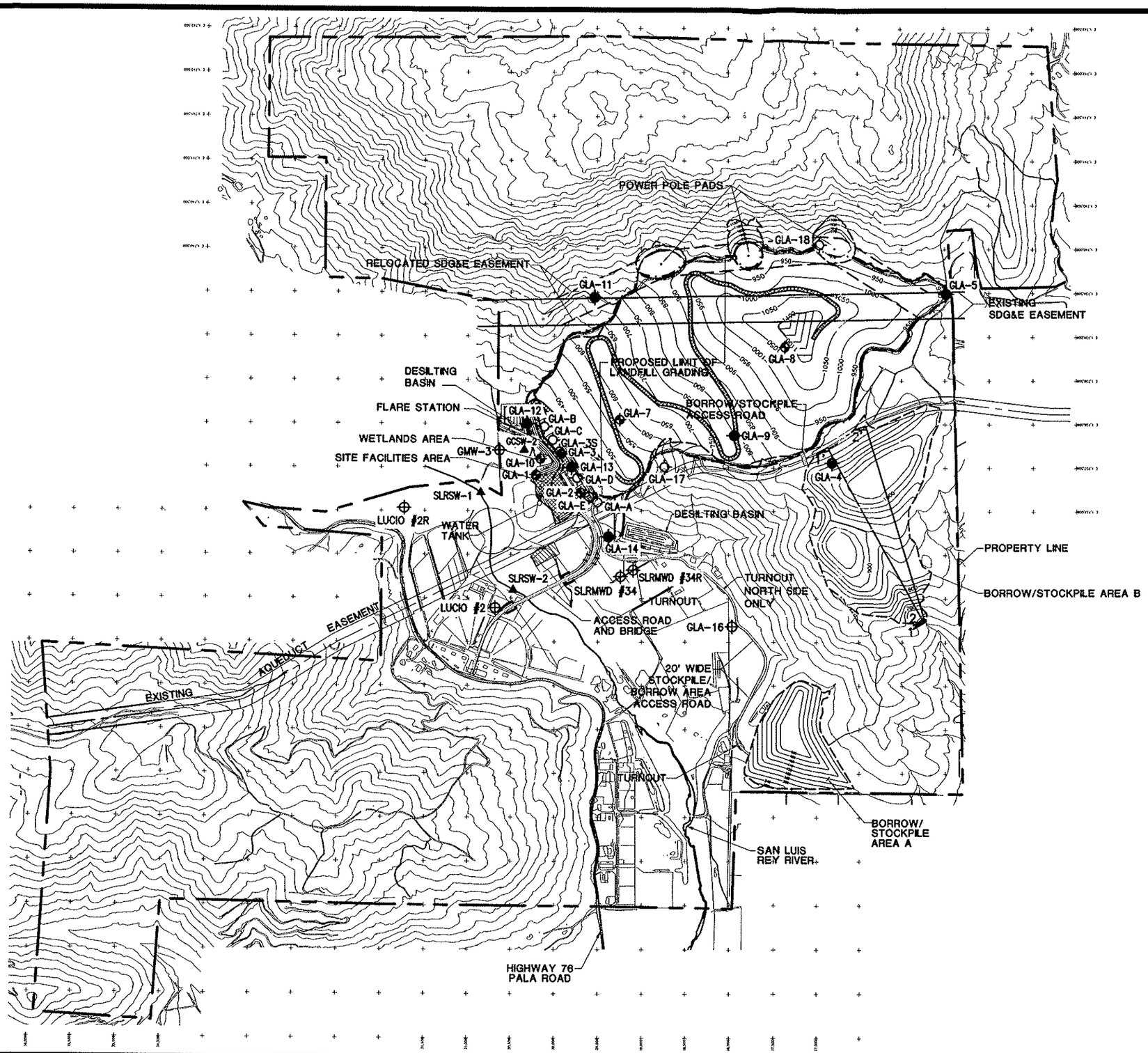

LEGEND

- PROPERTY LINE
- APPROXIMATE LIMIT OF LANDFILL GRADING
- BORROW/STOCKPILE AREA LIMITS
- FINAL CONTOUR
- EXISTING CONTOUR
- ACCESS/HAUL ROAD
- SURFACE WATER SAMPLING LOCATION
- BEDROCK AQUIFER MONITORING WELL
- WATER LEVEL MEASURING STATION
- ALLUVIAL AQUIFER MONITORING WELL
- MONITORING WELL TO BE CONSTRUCTED
- 1 — 1' SLOPE STABILITY CROSS-SECTION LOCATION

N

GRAPHIC SCALE
600 0 300 600 1200
(in feet)
1 inch = 1200 ft.

FIGURE 2-7

PROPOSED DETECTION MONITORING NETWORK

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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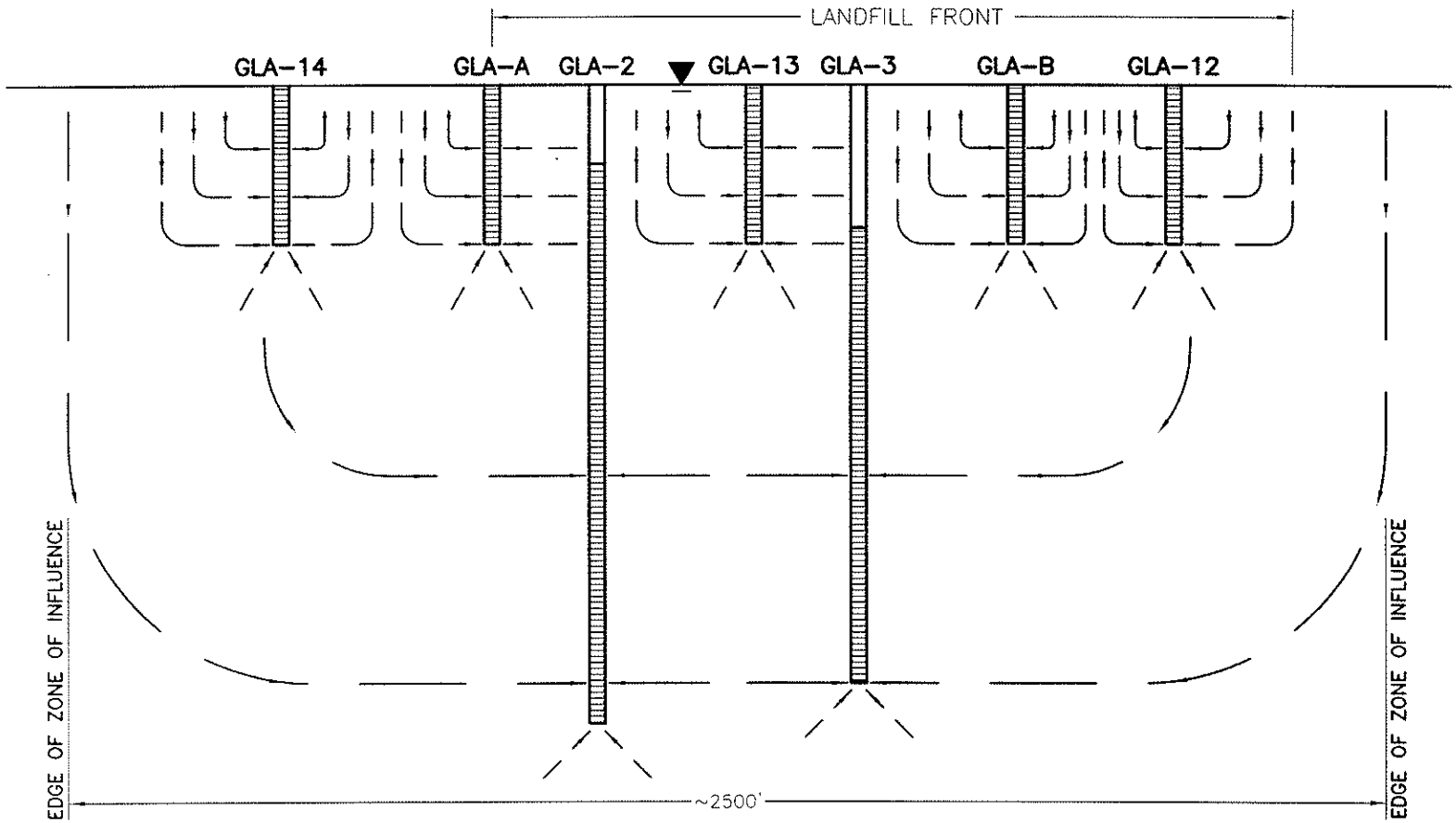

SCHEMATIC DIAGRAM OF FLOW LINES WITHIN THE ZONE OF INFLUENCE OF EACH GROUNDWATER MONITORING WELL

DRAWING SCALES
HORIZ.: 1" = 300'
VERT.: 1" = 20'

EXPLANATION:

- WATER TABLE
- GROUNDWATER FLOW DIRECTION
- WELL CASING
- WELL SCREEN

FIGURE 2-8

MONITORING WELL FLOW SYSTEM

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

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SECTION 2.0

TABLES

TABLE 2-1
WATER WELLS WITHIN ONE MILE OF
THE GREGORY CANYON LANDFILL

CONFIDENTIAL (NOT FOR PUBLIC DISTRIBUTION)

TABLE 2-2
SUMMARY OF PUMPING TEST RESULTS
GREGORY CANYON LANDFILL

	Well	Distance From Pumping Well (feet)	Aquifer Thickness (feet)	Analytical Method	Data Points	Hydraulic Conductivity (ft/min)	Transmissivity (ft^2/min)	Storativity
Pump Test #1	GLA-3	1	60	Cooper-Jacob, unconfined	late	4.62E-03	2.77E-01	na
		1	na	Cooper-Jacob, confined	late	4.09E-03	2.45E-01	8.87E-08
		1	60	Theis, unconfined	late	2.69E-03	1.61E-01	na
	GMW-1	51	52	Cooper-Jacob, unconfined	late	4.59E-03	2.38E-01	na
		51	na	Cooper-Jacob, confined	late	4.35E-03	2.26E-01	1.28E-04
		51	na	Theis, unconfined	late	4.23E-03	2.20E-01	na
	GLA-13	200	14.5	Cooper-Jacob, unconfined	late	1.33E-02	1.92E-01	na
		200	na	Cooper-Jacob, confined	late	na	1.90E-01	na
		200	14.5	Theis, unconfined	late	1.05E-02	1.52E-01	na
	GLA-3/GMW-1	1, 51	60	Distance-Drawdown, unconfined	t = 1600	3.18E-03	1.91E-01	na
	GLA-3/GLA13	1, 200	60	Distance-Drawdown, unconfined	t = 1600	2.55E-03	1.53E-01	na
	GMW-1/GLA-13	51, 200	52	Distance-Drawdown, unconfined	t = 1600	1.89E-03	9.84E-02	na
	GLA-3, GMW-1, GLA-13	1, 51, 200	60	Distance-Drawdown, unconfined	t = 1600	2.63E-03	1.58E-01	na
Pump Test #2	GLA-8	1	108	Cooper-Jacob, unconfined	late	1.18E-05	1.28E-03	na
		1	na	Cooper-Jacob, confined	late	na	8.68E-04	4.08E-01
		1	108	Cooper-Jacob, unconfined	middle*	6.22E-05	6.72E-03	9.37E-04
		1	na	Cooper-Jacob, confined	middle	na	5.90E-03	7.63E-03
		1	108	Theis, unconfined	mid-late	6.22E-05	6.72E-03	na
	GMW-4	21	46	Cooper-Jacob, unconfined	late	2.06E-04	9.47E-03	na
		21	na	Cooper-Jacob, confined	late	na	8.84E-03	1.00E-03
		21	46	Cooper-Jacob, unconfined	middle	3.41E-04	1.56E-02	na
		21	na	Cooper-Jacob, confined	middle	na	1.62E-02	9.37E-02
		21	46	Theis, unconfined	late	1.46E-04	6.72E-03	na
	GLA-8/GMW-4	1,21	na	Distance-Drawdown, unconfined	t = 600	1.09E-04	1.18E-02	na
	GLA-8/GMW-4	1,21	na	Distance-Drawdown, unconfined	t = 1400	5.72E-05	6.18E-03	na

* Middle data points correspond to early pumping times referred to in text.

Shading indicates values around for MODFLOW analysis.

TABLE 2-3
PROPOSED GREGORY CANYON LANDFILL
DOWNGRADIENT VS. UPGRADIENT MONITORING POINTS
AUGUST 1999

ANALYTE	DOWNGRADIENT LOCATIONS						UPGRADIENT LOCATIONS		SURFACE WATER	
	RES. WELL 2	RES. WELL 3	RES. WELL 4	GLA-2	GLA-7	GLA-10	GLA-4	GLA-5	RIVER UP	RIVER DOWN
GENERAL CHEMISTRY (mg/L):										
Chloride	74	78	91	164	120	120	46	157	86	96
Nitrate (as N)	0.3	**0.077**	0.7	26.2	0.6	7.1	1.0	16.6	**0.098**	0.3
pH (units)	6.98	7.01	6.80	7.10	6.53	6.70	6.42	6.66	7.08	7.40
Sulfate	115	150	168	136	76	63	30	309	84	171
Total Dissolved Solids (TDS)	506	558	671	888	578	608	444	992	585	622
VOLATILE ORGANIC COMPOUNDS (µg/L):										
Acetone	3.0	3.0	**4.9***	**3.0***	3.0	3.0	3.0	3.0	**4.8***	3.0
Chloroform	0.16	0.16	1.2	0.16	0.16	0.16	0.16	0.16	0.16	0.16
p+m-Xylenes	0.30	0.30	0.30	**0.69**	0.30	0.30	0.30	0.30	0.30	0.30
Toluene	0.11	0.11	0.11	**0.52**	0.11	0.11	0.11	0.11	0.11	0.11

NOTES:

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

* Suspected laboratory/field contaminant.

TABLE 2-4
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-2

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	164	369	450	529	600	450	422	168	164	600
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	26.2	41.8	42.9	42.9	43	42.9	39.4	7.4	26.2	43
pH	units	7.10	7.39	7.37	7.34	7.9	7.37	7.42	0.29	7.10	7.9
Sulfate	mg/L	136	160	150	160	190	160	159	20	136	190
Sulfide	mg/L	NA	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	888	1400	1410	1620	1940	1410	1452	384	888	1940
METALS											
Antimony	mg/L	NA	**0.010**	0.008	0.008	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	**0.001**	0.0007	0.0007	**0.0019**	NC	NC	NC	NC	NC
Barium	mg/L	NA	**0.053**	0.0009	0.066	**0.066**	0.07	0.06	0.01	0.053	0.066
Beryllium	mg/L	NA	0.00032	0.00032	0.00032	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.004	0.004	0.004	**0.00031**	NC	NC	NC	NC	NC
Calcium	mg/L	NA	120	160	170	180	165	158	26	120	180
Chromium	mg/L	NA	0.004	0.004	0.004	**0.0031**	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00085**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.005**	0.003	0.003	**0.0061**	NC	NC	NC	NC	NC
Lead	mg/L	NA	**0.0004**	**0.0005**	0.004	0.000098	NC	NC	NC	NC	NC
Magnesium	mg/L	NA	71	92	100	96	94	90	13	71	100
Mercury	mg/L	NA	0.00010	0.00010	**0.00013**	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	0.003	0.003	0.003	**0.0066**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.003	**0.001**	0.0006	0.012	0.003	0.005	0.006	0.001	0.012
Silver	mg/L	NA	**0.004**	0.003	**0.003**	**0.0018**	0.003	0.0029	0.0011	0.0018	0.004
Sodium	mg/L	NA	200	240	230	240	235	228	19	200	240
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	0.002	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.040	0.050	0.040	0.041	0.041	0.043	0.005	0.040	0.050
Zinc	mg/L	NA	0.0085	0.011	**0.0057**	0.022	0.0098	0.0118	0.0071	0.0057	0.022
VOLATILE ORGANIC COMPOUNDS											
Acetone	µg/L	**4.3**[a]	0.5	5.935	5.935	4.2	NC	NC	NC	NC	NC
p+m-Xylenes	µg/L	**0.69**	0.5	NA	NA	0.30	NC	NC	NC	NC	NC
Toluene	µg/L	**0.52**	0.5	0.047	0.047	0.22	NC	NC	NC	NC	NC
Trichlorofluoromethane	µg/L	0.35	0.5	0.13	0.044	0.23	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	**1.8**[a]	0.33	NA	2.0	NC	NC	NC	NC	NC
Butylbenzyl Phthalate	µg/L	NA	**0.28**[a]	0.24	NA	2.1	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-5
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-4

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	46	68	75	78	78	75	69	13	46	78
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	1.0	1.61	1.50	1.48	1.6	1.50	1.44	0.25	1.0	1.61
pH	units	6.42	7.21	7.22	7.03	7.1	7.1	7.0	0.33	6.42	7.22
Sulfate	mg/L	30	39	38	35	42	38	37	5	30	42
Sulfide	mg/L	NA	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	444	477	453	490	480	477	469	19	444	490
METALS											
Antimony	mg/L	NA	**0.020**	0.008	0.008	**0.00013**	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	0.0007	**0.0009**	0.0007	**0.0012**	NC	NC	NC	NC	NC
Barium	mg/L	NA	**0.030**	0.0009	0.030	**0.028**	0.030	0.029	0.001	0.028	0.030
Beryllium	mg/L	NA	0.00032	0.00032	0.00032	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.0004	0.004	0.004	**0.00020**	NC	NC	NC	NC	NC
Calcium	mg/L	NA	58	72	72	71	72	68	7	58	72
Chromium	mg/L	NA	0.0004	0.004	0.004	**0.0071**	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00044**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.008**	0.003	**0.004**	**0.0055**	0.0055	0.0058	0.002	0.004	0.008
Lead	mg/L	NA	**0.0004**	0.0004	0.0004	**0.00019**	NC	NC	NC	NC	NC
Magnesium	mg/L	NA	21	23	22	20	22	22	1	20	23
Mercury	mg/L	NA	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	0.003	0.003	0.020	**0.0047**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0006	**0.0006**	0.0006	**0.0022**	NC	NC	NC	NC	NC
Silver	mg/L	NA	**0.004**	0.003	0.003	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	NA	68	79	74	77	76	75	5	68	79
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	0.002	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.010	0.003	**0.007**	**0.0066**	0.007	0.0079	0.0019	0.0066	0.010
Zinc	mg/L	NA	**0.032**	0.460	0.450	1.200	0.455	0.536	0.486	0.032	1.200
VOLATILE ORGANIC COMPOUNDS											
1,2,4-Trimethylbenzene	µg/L	0.21	0.5	0.078	0.52	NA	NC	NC	NC	NC	NC
1,3,5-Trimethylbenzene	µg/L	0.24	0.5	0.066	**0.21**	NA	NC	NC	NC	NC	NC
Benzene	µg/L	0.25	0.5	0.044	**0.11**	0.18	NC	NC	NC	NC	NC
Ethylbenzene	µg/L	0.17	0.5	0.057	**0.41**	0.18	NC	NC	NC	NC	NC
n-Propylbenzene	µg/L	0.25	0.5	0.053	**0.12**	NA	NC	NC	NC	NC	NC
Naphthalene	µg/L	0.57	0.5	0.094	**0.26**	0.42	NC	NC	NC	NC	NC
tert-Butylbenzene	µg/L	0.16	0.5	0.066	**0.08**	NA	NC	NC	NC	NC	NC
Toluene	µg/L	0.11	0.5	0.047	1.4[a]	0.22	NC	NC	NC	NC	NC
Xylenes (Total)	µg/L	NA	1.0	0.236	2.7	NA	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS											
Benzoic Acid	µg/L	NA	0.86	0.86	**2.6**	NA	NC	NC	NC	NC	NC
bis(2-Ethylhexyl) Phthalate	µg/L	NA	**2.4[a]**	0.34	**1.1[a]**	2.0	NC	NC	NC	NC	NC
Butylbenzyl Phthalate	µg/L	NA	0.25	0.25	**0.44[a]**	2.1	NC	NC	NC	NC	NC
Di-n-butyl Phthalate	µg/L	NA	0.25	0.25	**0.36[a]**	2.6	NC	NC	NC	NC	NC
Naphthalene	µg/L	NA	0.25	0.25	**0.29[a]**	3.5	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

[ ] Indicates that the analyte was not detected above laboratory practical quantitation limit.

Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

[NC] No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-6
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-5

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	Sep 2001	Dec 2001
GENERAL CHEMISTRY								
Chloride	mg/L	157	156	163	NA	150	150	147
Cyanide	mg/L	NA	0.0063	0.0063	NA	0.0006	0.0006	0.02
Nitrate/Nitrite	mg/L	16.6	18.6	18.8	NA	21	21	NA
Nitrate as Nitrogen	mg/L	NA	NA	NA	NA	NA	NA	1.94
pH	units	6.66	7.09	7.28	NA	6.70	6.7	6.3
Sulfate	mg/L	309	313	317	NA	350	350	203
Sulfide	mg/L	NA	0.050	0.050	NA	0.1	0.1	0.1
Total Dissolved Solids (TDS)	mg/L	992	1030	1000	NA	1120	1130	1650
METALS								
Antimony	mg/L	NA	**0.010**	0.008	NA	0.00012	0.00012	0.01
Arsenic	mg/L	NA	0.0007	0.0007	NA	0.00030	0.00030	0.005
Barium	mg/L	NA	0.150	0.180	NA	0.170	0.170	0.005
Beryllium	mg/L	NA	0.00032	0.00032	NA	0.00042	0.00042	0.002
Cadmium	mg/L	NA	0.004	0.004	NA	0.00012	0.00012	0.04
Calcium	mg/L	NA	93	110	NA	110	100	19.1
Chromium	mg/L	NA	0.004	0.004	NA	**0.0022**	**0.0032**	0.02
Cobalt	mg/L	NA	0.002	0.002	NA	**0.00052**	**0.00051**	NA
Copper	mg/L	NA	0.003	0.003	NA	**0.0022**	**0.0024**	0.005
Lead	mg/L	NA	0.0004	0.0004	NA	**0.00070**	**0.00140**	0.002
Magnesium	mg/L	NA	56	66	NA	58	57	74
Mercury	mg/L	NA	0.00010	0.00010	NA	0.00043	0.00043	0.001
Nickel	mg/L	NA	0.003	0.003	NA	**0.0038**	**0.0039**	0.04
Selenium	mg/L	NA	0.0006	**0.0007**	NA	**0.0016**	**0.0017**	0.005
Silver	mg/L	NA	**0.003**	0.003	NA	**0.00013**	**0.00010**	0.005
Sodium	mg/L	NA	100	120	NA	140	130	165
Thallium	mg/L	NA	0.020	0.0007	NA	0.00063	0.000063	0.01
Tin	mg/L	NA	NA	0.006	NA	0.00083	0.000083	0.05
Vanadium	mg/L	NA	0.020	0.020	NA	0.038	0.038	0.05
Zinc	mg/L	NA	**0.018**	0.089	NA	0.022	0.028	0.01
VOLATILE ORGANIC COMPOUNDS								
Carbon Disulfide	µg/L	0.54	0.5	0.266	0.266	**0.31**[a]	**0.28**[a]	NA
SEMI-VOLATILE ORGANIC COMPOUNDS								
bis(2-Ethylhexyl) Phthalate	µg/L	NA	**1.8**[a]	0.34	NA	2.0	2.0	0.83
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND								

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

TABLE 2-6 (CONT'D)
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-5

ANALYTE	UNITS	Dec 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY							
Chloride	mg/L	150	150	153	6	147	163
Cyanide	mg/L	0.02	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	NA	18.8	19.2	1.9	16.6	21
Nitrate as Nitrogen	mg/L	1.76	NC	NC	NC	NC	NC
pH	units	NA	6.70	6.79	0.35	6.3	7.28
Sulfate	mg/L	179	313	289	69	179	350
Sulfide	mg/L	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	1575	1120	1214	278	992	1650
METALS							
Antimony	mg/L	NA	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	NC	NC	NC	NC	NC
Barium	mg/L	NA	0.170	0.168	0.013	0.150	0.180
Beryllium	mg/L	NA	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	NC	NC	NC	NC	NC
Calcium	mg/L	17.0	97	75	44	17	110
Chromium	mg/L	NA	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	NC	NC	NC	NC	NC
Copper	mg/L	NA	NC	NC	NC	NC	NC
Lead	mg/L	NA	NC	NC	NC	NC	NC
Magnesium	mg/L	68	62	63	7	56	74
Mercury	mg/L	NA	NC	NC	NC	NC	NC
Nickel	mg/L	NA	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0016	0.0013	0.0006	0.0007	0.0017
Silver	mg/L	NA	0.0001	0.0011	0.0017	0.000098	0.0030
Sodium	mg/L	158	135	136	24	100	165
Thallium	mg/L	NA	NC	NC	NC	NC	NC
Tin	mg/L	NA	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.029	0.029	0.010	0.020	0.038
Zinc	mg/L	NA	0.025	0.039	0.033	0.018	0.089
VOLATILE ORGANIC COMPOUNDS							
Carbon Disulfide	µg/L	NA	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS							
bis(2-Ethylhexyl) Phthalate	µg/L	NA	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND							

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit. Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-7
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-10

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	120	142	151	144	140	142	139	12	120	151
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.00006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	7.1	6.34	6.59	6.17	5.4	6.34	6.32	0.62	5.4	7.1
pH	units	6.70	7.35	7.30	7.18	7.4	7.30	7.19	0.28	6.70	7.4
Sulfate	mg/L	63	61	62	60	60	61	61	1	60	63
Sulfide	mg/L	NA	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	608	637	587	590	1250	608	734	289	587	1250
METALS											
Antimony	mg/L	NA	**0.009**	0.008	**0.009**	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	0.0007	0.0007	0.0007	0.00030	NC	NC	NC	NC	NC
Barium	mg/L	NA	**0.061**	0.0009	0.064	**0.061**	0.061	0.062	0.002	0.061	0.064
Beryllium	mg/L	NA	0.00032	0.00032	0.00032	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	NA	57	68	62	63	63	63	5	57	68
Chromium	mg/L	NA	**0.004**	0.004	0.004	**0.0030**	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00040**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.009**	0.003	0.003	**0.0020**	NC	NC	NC	NC	NC
Lead	mg/L	NA	**0.0006**	0.0004	0.0004	**0.00029**	NC	NC	NC	NC	NC
Magnesium	mg/L	NA	32	39	36	33	35	35	3	32	39
Mercury	mg/L	NA	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	**0.004**	0.003	0.003	**0.0033**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0006	0.0006	0.0006	**0.0024**	NC	NC	NC	NC	NC
Silver	mg/L	NA	**0.005**	0.003	0.003	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	NA	82	98	88	91	90	90	7	82	98
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	0.002	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.030	0.040	0.030	0.031	0.031	0.033	0.005	0.030	0.040
Zinc	mg/L	NA	**0.026**	0.270	0.072	0.700	0.171	0.267	0.307	0.026	0.700
VOLATILE ORGANIC COMPOUNDS (µg/L)											
Carbon Disulfide	µg/L	0.54	0.5	0.266	0.266	5.5[a]	NC	NC	NC	NC	NC
Ethylbenzene	µg/L	0.17	0.5	0.057	**0.07**	0.18	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	**2.5[a]**	0.34	**0.59[a]**	2.0	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-8
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-11

ANALYTE	UNITS	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY										
Chloride	mg/L	177	177	184	180	179	180	3	177	184
Cyanide	mg/L	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	0.020	0.020	0.32	**0.17**	NC	NC	NC	NC	NC
pH	units	7.61	7.74	7.60	7.4	7.61	7.59	0.14	7.4	7.74
Sulfate	mg/L	82	78	85	94	84	85	7	78	94
Sulfide	mg/L	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	763	733	750	750	750	749	12	733	763
METALS										
Antimony	mg/L	0.008	0.008	0.008	**0.00026**	NC	NC	NC	NC	NC
Arsenic	mg/L	0.004	0.006	0.004	0.004	0.004	0.005	0.001	0.004	0.006
Barium	mg/L	**0.002**	0.0009	**0.0060**	**0.0039**	0.00	0.00	0.00	0.002	0.006
Beryllium	mg/L	0.0003	0.0003	0.0003	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	90	100	98	93	96	95	5	90	100
Chromium	mg/L	0.004	0.004	0.004	**0.0087**	NC	NC	NC	NC	NC
Cobalt	mg/L	0.002	0.002	0.002	**0.00045**	NC	NC	NC	NC	NC
Copper	mg/L	**0.004**	0.003	0.003	**0.0039**	NC	NC	NC	NC	NC
Lead	mg/L	**0.0007**	0.0004	0.0004	0.019	NC	NC	NC	NC	NC
Magnesium	mg/L	27	32	32	31	32	31	2	27	32
Mercury	mg/L	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	**0.004**	0.003	0.020	0.013	0.013	0.012	0.008	0.004	0.020
Selenium	mg/L	0.003	0.0006	0.0006	**0.0015**	NC	NC	NC	NC	NC
Silver	mg/L	0.003	0.003	0.003	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	91	100	110	120	105	105	13	91	120
Thallium	mg/L	**0.030**	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	0.006	0.006	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	0.003	0.003	**0.0060**	**0.0050**	NC	NC	NC	NC	NC
Zinc	mg/L	**0.0091**	0.00089	0.013	0.024	0.013	0.015	0.008	0.009	0.024
VOLATILE ORGANIC COMPOUNDS										
Carbon Disulfide	µg/L	0.5	0.266	0.266	**0.37**[a]	NC	NC	NC	NC	NC
Ethylbenzene	µg/L	0.5	0.057	**0.09**	0.18	NC	NC	NC	NC	NC
Toluene	µg/L	0.5	**0.13**[a]	**0.25**[a]	0.22	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS										
bis(2-Ethylhexyl) Phthalate	µg/L	0.33	6.6[a]	**4.2**[a]	2.0	NC	NC	NC	NC	NC
Butylbenzyl Phthalate	µg/L	0.25	0.25	**0.40**[a]	2.1	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND										

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-9
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-12

ANALYTE	UNITS	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY										
Chloride	mg/L	115	117	119	120	118	118	2	115	120
Cyanide	mg/L	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	0.24	0.28	0.28	**0.1**	0.26	0.23	0.09	0.1	0.28
pH	units	7.38	7.42	7.16	6.9	7.27	7.22	0.24	6.9	7.42
Sulfate	mg/L	38	39	38	46	39	40	4	38	46
Sulfide	mg/L	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	517	490	520	510	514	509	14	490	520
METALS										
Antimony	mg/L	**0.020**	0.008	0.008	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	0.0007	0.0007	0.0007	**0.00045**	NC	NC	NC	NC	NC
Barium	mg/L	**0.020**	0.0009	0.020	**0.017**	0.020	0.019	0.002	0.017	0.020
Beryllium	mg/L	0.0003	0.0003	0.0003	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	42	47	49	48	48	47	3	42	49
Chromium	mg/L	**0.005**	0.004	0.004	**0.0036**	NC	NC	NC	NC	NC
Cobalt	mg/L	0.002	0.002	0.002	**0.00027**	NC	NC	NC	NC	NC
Copper	mg/L	**0.008**	0.003	0.003	**0.0052**	NC	NC	NC	NC	NC
Lead	mg/L	**0.002**	0.0004	0.0004	**0.00010**	NC	NC	NC	NC	NC
Magnesium	mg/L	26	29	30	27	28	28	2	26	30
Mercury	mg/L	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	**0.004**	0.003	0.003	**0.0025**	NC	NC	NC	NC	NC
Selenium	mg/L	0.0006	**0.0007**	0.0006	**0.0023**	NC	NC	NC	NC	NC
Silver	mg/L	**0.006**	0.003	0.003	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	74	86	88	86	86	84	6	74	88
Thallium	mg/L	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	0.006	0.006	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	0.030	0.030	0.030	0.028	0.030	0.030	0.001	0.028	0.030
Zinc	mg/L	**0.016**	0.00089	0.010	**0.0072**	0.010	0.011	0.004	0.007	0.016
VOLATILE ORGANIC COMPOUNDS										
Carbon Disulfide	µg/L	0.5	0.266	0.266	**0.3**[a]	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS										
bis(2-Ethylhexyl) Phthalate	µg/L	**0.35**[a]	0.33	**0.79**[a]	2.0	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND										

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-10
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-13

ANALYTE	UNITS	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY										
Chloride	mg/L	127	290	269	260	265	237	74	127	290
Cyanide	mg/L	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	25.9	28.5	29.3	28	28.3	27.9	1.5	25.9	29.3
pH	units	7.49	7.24	7.19	6.7	7.22	7.16	0.33	6.7	7.49
Sulfate	mg/L	119	129	137	130	130	129	7	119	137
Sulfide	mg/L	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	885	1010	990	1120	1000	1001	96	885	1120
METALS										
Antimony	mg/L	0.008	0.008	**0.010**	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	0.002	0.0007	0.0007	**0.00098**	NC	NC	NC	NC	NC
Barium	mg/L	**0.020**	0.0009	0.079	**0.073**	0.073	0.057	0.032	0.020	0.079
Beryllium	mg/L	0.0003	0.0003	0.0003	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	67	100	100	110	100	94	19	67	110
Chromium	mg/L	0.004	0.004	0.004	**0.0056**	NC	NC	NC	NC	NC
Cobalt	mg/L	0.002	0.002	0.002	**0.00055**	NC	NC	NC	NC	NC
Copper	mg/L	0.003	0.003	0.003	**0.0028**	NC	NC	NC	NC	NC
Lead	mg/L	**0.0006**	**0.0004**	0.00040	#######	NC	NC	NC	NC	NC
Magnesium	mg/L	39	65	65	62	64	58	13	39	65
Mercury	mg/L	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	0.003	0.003	**0.0030**	**0.0062**	NC	NC	NC	NC	NC
Selenium	mg/L	0.003	**0.0008**	0.0006	**0.0037**	NC	NC	NC	NC	NC
Silver	mg/L	0.003	0.003	0.003	#######	NC	NC	NC	NC	NC
Sodium	mg/L	110	130	130	140	130	128	13	110	140
Thallium	mg/L	0.020	0.0007	0.0007	#######	NC	NC	NC	NC	NC
Tin	mg/L	NA	0.006	0.006	#######	NC	NC	NC	NC	NC
Vanadium	mg/L	0.020	0.030	0.030	0.032	0.030	0.028	0.005	0.020	0.032
Zinc	mg/L	**0.021**	0.047	0.047	0.053	0.047	0.042	0.014	0.021	0.053
VOLATILE ORGANIC COMPOUNDS										
Carbon Disulfide	µg/L	0.5	0.266	0.266	**0.35**[a]	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS										
bis(2-Ethylhexyl) Phthalate	µg/L	**0.99**[a]	0.33	**0.67**[a]	2.0	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs										
2,4-D	µg/L	0.16	0.16	0.16	**0.17**	NC	NC	NC	NC	NC

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-11
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-14

ANALYTE	UNITS	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY										
Chloride	mg/L	159	160	155	160	160	159	2	155	160
Cyanide	mg/L	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	15.6	15.5	15.1	14	15.3	15.1	0.7	14	15.6
pH	units	7.47	7.56	7.29	6.8	7.38	7.28	0.34	6.8	7.56
Sulfate	mg/L	74	70	75	71	73	73	2	70	75
Sulfide	mg/L	0.050	0.050	0.25	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	697	667	667	730	682	690	30	667	730
METALS										
Antimony	mg/L	**0.010**	0.008	0.008	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	0.0007	**0.0009**	0.0007	**0.0014**	NC	NC	NC	NC	NC
Barium	mg/L	**0.096**	0.120	0.130	0.110	0.12	0.11	0.01	0.096	0.13
Beryllium	mg/L	0.0003	0.0003	0.0003	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	69	82	75	73	74	75	5	69	82
Chromium	mg/L	0.004	0.004	0.004	**0.0038**	NC	NC	NC	NC	NC
Cobalt	mg/L	0.002	0.002	0.002	**0.00035**	NC	NC	NC	NC	NC
Copper	mg/L	**0.007**	0.003	0.003	**0.0014**	NC	NC	NC	NC	NC
Lead	mg/L	0.004	**0.0004**	0.004	0.000098	NC	NC	NC	NC	NC
Magnesium	mg/L	39	46	43	38	41	42	4	38	46
Mercury	mg/L	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	0.003	0.003	**0.004**	**0.0067**	NC	NC	NC	NC	NC
Selenium	mg/L	0.0006	**0.0008**	0.0006	**0.0032**	NC	NC	NC	NC	NC
Silver	mg/L	0.003	0.003	0.003	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	84	100	92	94	93	93	7	84	100
Thallium	mg/L	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	0.006	**0.003**	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	0.030	0.030	0.030	0.025	0.030	0.029	0.003	0.025	0.030
Zinc	mg/L	**0.012**	0.00089	**0.0092**	**0.0054**	0.0092	0.0089	0.0033	0.0054	0.012
VOLATILE ORGANIC COMPOUNDS										
Carbon Disulfide	µg/L	0.5	0.266	0.266	**0.31**[a]	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS										
bis(2-Ethylhexyl) Phthalate	µg/L	0.33	0.33	**1.2**[a]	2.0	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND										

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

TABLE 2-12
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL GLA-16

ANALYTE	UNITS	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY										
Chloride	mg/L	105	104	109	110	107	107	3	104	110
Cyanide	mg/L	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	6.24	5.90	6.60	7.1	6.42	6.46	0.51	5.90	7.1
pH	units	7.50	7.52	7.49	7.0	7.50	7.38	0.25	7.0	7.52
Sulfate	mg/L	109	98	108	120	109	109	9	98	120
Sulfide	mg/L	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	690	620	683	750	687	686	53	620	750
METALS										
Antimony	mg/L	**0.010**	0.008	0.008	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	**0.001**	**0.002**	**0.001**	**0.0014**	0.0012	0.0014	0.0005	0.001	0.002
Barium	mg/L	**0.061**	0.0009	0.081	**0.075**	0.08	0.07	0.01	0.061	0.081
Beryllium	mg/L	0.0003	0.0003	0.0003	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	76	77	85	82	80	80	4	76	85
Chromium	mg/L	**0.0050**	0.004	0.004	**0.0088**	NC	NC	NC	NC	NC
Cobalt	mg/L	0.002	0.002	0.002	**0.00039**	NC	NC	NC	NC	NC
Copper	mg/L	**0.0040**	0.003	0.003	**0.0012**	NC	NC	NC	NC	NC
Lead	mg/L	**0.0005**	**0.0005**	0.00040	0.000098	NC	NC	NC	NC	NC
Magnesium	mg/L	36	37	41	36	37	38	2	36	41
Mercury	mg/L	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	0.003	0.003	0.003	**0.0029**	NC	NC	NC	NC	NC
Selenium	mg/L	0.003	**0.0006**	0.0006	**0.0018**	NC	NC	NC	NC	NC
Silver	mg/L	0.003	0.003	0.003	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	72	74	81	80	77	77	4	72	81
Thallium	mg/L	**0.020**	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	0.006	0.006	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	0.030	0.030	0.030	0.029	0.030	0.030	0.001	0.029	0.030
Zinc	mg/L	**0.0073**	0.00089	**0.0012**	**0.0044**	0.0044	0.0043	0.0031	0.0012	0.0073
VOLATILE ORGANIC COMPOUNDS										
Carbon Disulfide	µg/L	0.5	0.266	0.266	**0.32**[a]	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS										
Acenaphthene	µg/L	0.23	**0.31**	0.36	2.9	NC	NC	NC	NC	NC
bis(2-Ethylhexyl) Phthalate	µg/L	0.33	0.33	**0.81**[a]	2.0	NC	NC	NC	NC	NC
Hexachlorobenzene	µg/L	0.27	**0.67**	0.27	2.4	NC	NC	NC	NC	NC
Pyrene	µg/L	0.23	**0.60**	0.23	1.7	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs										
beta-BHC	µg/L	0.0076	0.0011	0.0011	0.01	NC	NC	NC	NC	NC

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.

Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

TABLE 2-13
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL LUCIO-2

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	91	94	91	103	100	94	96	5	91	103
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	0.7	0.42	1.40	0.57	1.0	0.7	0.82	0.39	0.42	1.40
pH	units	6.80	7.35	7.51	7.35	7.2	7.35	7.24	0.27	6.80	7.51
Sulfate	mg/L	168	147	134	159	160	159	154	13	134	168
Sulfide	mg/L	NA	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	671	657	610	667	680	667	657	28	610	680
METALS											
Antimony	mg/L	NA	0.008	0.008	0.008	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	0.007	**0.001**	0.0007	**0.00066**	NC	NC	NC	NC	NC
Barium	mg/L	NA	0.110	0.120	0.110	0.100	0.110	0.110	0.008	0.100	0.120
Beryllium	mg/L	NA	0.0003	0.0003	0.0003	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	NA	86	98	94	97	96	94	5	86	98
Chromium	mg/L	NA	0.004	0.004	**0.0040**	0.00012	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00059**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.007**	0.003	**0.006**	**0.0057**	0.006	0.0062	0.0007	0.0057	0.007
Lead	mg/L	NA	**0.0007**	**0.0006**	**0.0007**	0.000098	0.0007	0.0007	0.0001	0.0006	0.0007
Magnesium	mg/L	NA	30	35	34	32	33	33	2	30	35
Mercury	mg/L	NA	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	0.003	0.003	0.003	**0.0038**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0006	**0.0006**	0.0006	**0.0018**	NC	NC	NC	NC	NC
Silver	mg/L	NA	0.003	0.003	**0.005**	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	NA	60	68	67	72	68	67	5	60	72
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	0.006	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.010	0.010	0.010	0.014	0.010	0.011	0.002	0.010	0.014
Zinc	mg/L	NA	**0.021**	0.0009	**0.0090**	**0.0085**	0.0090	0.0128	0.0071	0.0085	0.021
VOLATILE ORGANIC COMPOUNDS											
Acetone	µg/L	**4.9**[a]	0.5	5.935	5.935	4.2	NC	NC	NC	NC	NC
Chloroform	µg/L	1.2	0.98	0.164	0.164	0.28	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	0.33	0.33	**0.62**[a]	2.0	NC	NC	NC	NC	NC
Hexachlorobutadiene	µg/L	NA	**0.64**	0.36	0.36	3.6	NC	NC	NC	NC	NC
Pyrene	µg/L	NA	**0.27**	0.23	0.23	1.7	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-14
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - MONITORING WELL MWD-34

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	78	75	81	78	78	78	78	2	75	81
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	**0.077**	0.020	0.020	0.020	**0.04**	NC	NC	NC	NC	NC
pH	units	7.01	7.64	7.69	7.66	6.3	7.64	7.26	0.61	6.3	7.69
Sulfate	mg/L	150	144	144	140	140	144	144	4	140	150
Sulfide	mg/L	NA	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	558	547	543	560	580	558	558	14	543	580
METALS											
Antimony	mg/L	NA	0.008	0.008	0.008	**0.00013**	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	0.007	**0.001**	0.0007	**0.00052**	NC	NC	NC	NC	NC
Barium	mg/L	NA	**0.100**	0.110	0.100	**0.091**	0.100	0.100	0.008	0.091	0.110
Beryllium	mg/L	NA	0.00032	0.00032	0.00030	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	NA	74	86	79	81	80	80	5	74	86
Chromium	mg/L	NA	**0.004**	0.004	0.004	**0.00072**	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00042**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.006**	0.003	0.003	**0.0008**	NC	NC	NC	NC	NC
Lead	mg/L	NA	0.0004	**0.0005**	0.0004	0.000098	NC	NC	NC	NC	NC
Magnesium	mg/L	NA	26	30	28	27	28	28	2	26	30
Mercury	mg/L	NA	0.00010	0.00010	0.00100	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	0.003	0.003	0.003	**0.0025**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0006	0.0006	0.0006	0.00093	NC	NC	NC	NC	NC
Silver	mg/L	NA	**0.004**	0.003	**0.004**	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	NA	58	66	61	65	63	63	4	58	66
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	**0.004**	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.003	0.003	0.003	**0.0023**	NC	NC	NC	NC	NC
Zinc	mg/L	NA	**0.014**	0.0009	**0.0028**	**0.0055**	0.0055	0.0074	0.0058	0.0028	0.014
VOLATILE ORGANIC COMPOUNDS (µg/L): ND											
SEMI-VOLATILE ORGANIC COMPOUNDS (µg/L): ND											
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.

Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

TABLE 2-15
GREGORY CANYON LANDFILL
BEDROCK AQUIFER COMPARISON DATA
DOWNGRADIENT VS. UPGRADIENT MEDIAN

ANALYTE	DOWNGRADIENT LOCATIONS					UPGRADIENT LOCATIONS			ARARs	BASIN OBJECTIVES
	GLA-2 MEDIAN	GLA-10 MEDIAN	GLA-12 MEDIAN	GLA-13 MEDIAN	GLA-14 MEDIAN	GLA-4 MEDIAN	GLA-5 MEDIAN	GLA-11 MEDIAN		
GENERAL CHEMISTRY (mg/L):										
Chloride	450	142	118	265	160	75	150	179	500 **(2)	300
Cyanide	NC	NC	NC	NC	NC	NC	NC	NC	0.2 (1,3)	NV
Nitrate/Nitrite	42.9	6.34	0.26	28.3	15.3	1.50	18.8	NC	45 (1,3)	15
pH (units)	7.37	7.30	7.27	7.22	7.38	7.1	6.70	7.61	NV	NV
Sulfate	160	61	39	130	73	38	313	84	500 **(2)	500
Sulfide	NC	NC	NC	NC	NC	NC	NC	NC	NV	NV
Total Dissolved Solids (TDS)	1410	608	514	1000	682	477	1120	750	1000 **(2)	900
METALS (mg/L):										
Antimony	NC	NC	NC	NC	NC	NC	NC	NC	0.006 (1,3)	NV
Arsenic	NC	NC	NC	NC	NC	NC	NC	0.004	0.01 (1,3)	0.01
Barium	0.07	0.061	0.020	0.073	0.12	0.030	0.170	0.004	1(1) / 2(3)	1
Beryllium	NC	NC	NC	NC	NC	NC	NC	NC	0.004 (1,3)	NV
Cadmium	NC	NC	NC	NC	NC	NC	NC	NC	0.005 (1,3)	0.005
Calcium	165	63	48	100	74	72	97	96	NV	NV
Chromium-Total	NC	NC	NC	NC	NC	NC	NC	NC	0.05(1) / 0.1(3)	0.05
Cobalt	NC	NC	NC	NC	NC	NC	NC	NC	NV	NV
Copper	NC	NC	NC	NC	NC	0.0055	NC	NC	1.0(2)	1.0
Lead	NC	NC	NC	NC	NC	NC	NC	NC	0.015 (1,3)	0.015
Magnesium	94	35	28	64	41	22	62	32	NV	NV
Mercury	NC	NC	NC	NC	NC	NC	NC	NC	0.002 (1,3)	0.002
Nickel	NC	NC	NC	NC	NC	NC	NC	0.013	0.1 (1)	0.1
Selenium	0.003	NC	NC	NC	NC	NC	0.0016	NC	0.05 (1,3)	0.05
Silver	0.003	NC	NC	NC	NC	NC	0.0001	NC	0.1 (2)	0.1
Sodium	235	90	86	130	93	76	135	105	NV	NV
Thallium	NC	NC	NC	NC	NC	NC	NC	NC	0.002 (1,3)	0.002
Tin	NC	NC	NC	NC	NC	NC	NC	NC	NV	NV
Vanadium	0.041	0.031	0.030	0.030	0.030	0.007	0.029	NC	NV	NV
Zinc	0.0098	0.171	0.010	0.047	0.0092	0.455	0.025	0.013	5.0 (2)	5.0
VOLATILE ORGANIC COMPOUNDS (µg/L):										
Acetone	4.3	ND	ND	ND	ND	ND	ND	ND	NV	NV
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.52	ND	ND	NV	NV
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.21	ND	ND	NV	NV
Benzene	ND	ND	ND	ND	ND	0.11	ND	ND	1(1) / 5(3)	1
Carbon Disulfide	ND	5.5	0.3	0.35	0.31	ND	0.295	0.37	NV	NV
Ethylbenzene	ND	0.07	ND	ND	ND	0.41	ND	0.09	700(1,3)	700
n-Propylbenzene	ND	ND	ND	ND	ND	0.12	ND	ND	NV	NV
Naphthalene	ND	ND	ND	ND	ND	0.26	ND	ND	NV	NV
tert-Butylbenzene	ND	ND	ND	ND	ND	0.08	ND	ND	NV	NV
Toluene	0.52	ND	ND	ND	ND	1.4	ND	0.19	150 (1)/1000(3)	150
Trichlorofluoromethane	0.13	ND	ND	ND	ND	ND	ND	ND	150(1)	150
p+m-Xylenes	0.69	ND	ND	ND	ND	2.7	ND	ND	1750(1)/10,000(3)	1750
SEMI-VOLATILE ORGANIC COMPOUNDS (µg/L):										
Benzoic Acid	ND	ND	ND	ND	ND	2.6	ND	ND	NV	NV
bis (2-Ethylhexyl) phthalate	1.8	1.55	0.57	0.83	1.2	1.75	1.8	4.2	4(1)/6(3)	4
Butylbenzyl phthalate	0.28	ND	ND	ND	ND	0.44	ND	0.40	NV	NV
Di-n-butyl phthalate	ND	ND	ND	ND	ND	0.36	ND	ND	NV	NV
Naphthalene	ND	ND	ND	ND	ND	0.29	ND	ND	NV	NV
HERBICIDES, PESTICIDES & PCBs (µg/L):										
2,4-D	ND	ND	ND	0.17	ND	ND	ND	ND	70(1)	70

NOTES:

NC No calculation performed. Requires a minimum of three data entries.

NV No value available (in ARAR or Basin Objectives column).

ARAR = Applicable or Relevant and Appropriate Requirement.

** Value shown is the upper maximum contaminant limit (MCL).

(1) California Primary Drinking Water Standards.

(2) California Secondary Drinking Water Standards.

(3) Federal Maximum Contaminant Levels (MCLs).

[ ] Indicates that the analyte was not detected above laboratory practical quantitation limit. Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

ND Not detected above the method detection limit

TABLE 2-16
GREGORY CANYON LANDFILL
ALLUVIAL AQUIFER COMPARISON DATA
DOWNGRADIENT VS. UPGRADIENT MEDIAN

ANALYTE	DOWNGRADIENT LOCATIONS		UPGRADIENT LOCATION	ARARs	BASIN OBJECTIVES
	GLA-16 MEDIAN	SLR#34 MEDIAN	LUCIO #2 MEDIAN		
GENERAL CHEMISTRY (mg/L):					
Chloride	107	78	94	500 **(2)	300
Cyanide	NC	NC	NC	0.2 (1,3)	NV
Nitrate/Nitrite	6.42	NC	0.7	45 (1,3)	15
pH (units)	7.50	7.64	7.35	NV	NV
Sulfate	109	144	159	500 **(2)	500
Sulfide	NC	NC	NC	NV	NV
Total Dissolved Solids (TDS)	687	558	667	1000 **(2)	900
METALS (mg/L):					
Antimony	NC	NC	NC	0.006 (1,3)	NV
Arsenic	0.0012	NC	NC	0.01 (1,3)	0.01
Barium	0.08	0.100	0.110	1(1) / 2(3)	1
Beryllium	NC	NC	NC	0.004 (1,3)	NV
Cadmium	NC	NC	NC	0.005 (1,3)	0.005
Calcium	80	80	96	NV	NV
Chromium-Total	NC	NC	NC	0.05(1) / 0.1(3)	0.05
Cobalt	NC	NC	NC	NV	NV
Copper	NC	NC	0.006	1.0(2)	1.0
Lead	NC	NC	0.0007	0.015 (1,3)	0.015
Magnesium	37	28	33	NV	NV
Mercury	NC	NC	NC	0.002 (1,3)	0.002
Nickel	NC	NC	NC	0.1 (1)	0.1
Selenium	NC	NC	NC	0.05 (1,3)	0.05
Silver	NC	NC	NC	0.1 (2)	0.1
Sodium	77	63	68	NV	NV
Thallium	NC	NC	NC	0.002 (1,3)	0.002
Tin	NC	NC	NC	NV	NV
Vanadium	0.030	NC	0.010	NV	NV
Zinc	0.0044	0.0055	0.0090	5.0 (2)	5.0
VOLATILE ORGANIC COMPOUNDS (µg/L):					
Acetone	ND	ND	**4.9**	NV	NV
Carbon Disulfide	**0.32**	ND	ND	NV	NV
Chloroform	ND	ND	1.2	700(1,3)	700
SEMI-VOLATILE ORGANIC COMPOUNDS (µg/L):					
Acenaphthene	**0.31**	ND	ND	NV	NV
bis (2-Ethylhexyl) phthalate	**0.81**	ND	**0.62**	4(1)/6(3)	4
Hexachlorobenzene	**0.67**	ND	ND	1(1,3)	1
Hexachlorobutadiene	ND	ND	**0.64**	NV	NV
Pyrene	**0.60**	ND	**0.27**	NV	NV
HERBICIDES, PESTICIDES & PCBs (µg/L): ND					

NOTES:

NC No calculation performed. Requires a minimum of three data entries.

NV No value available (in ARAR or Basin Objectives column).

ARAR = Applicable or Relevant and Appropriate Requirement.

** Value shown is the upper maximum contaminant limit (MCL).

(1) California Primary Drinking Water Standards.

(2) California Secondary Drinking Water Standards.

(3) Federal Maximum Contaminant Levels (MCLs).

[ ] Indicates that the analyte was not detected above laboratory practical quantitation limit. Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

ND Not detected above the method detection limit

TABLE 2-17
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - SURFACE WATER STATION SW-1

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	86	103	107	113	120	107	106	13	86	120
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	**0.098**	**0.030**	0.020	**0.059**	**0.1**	0.079	0.072	0.034	0.030	0.1
pH	units	7.08	7.92	8.18	7.98	7.2	7.92	7.67	0.50	7.08	8.18
Sulfate	mg/L	84	185	183	204	220	185	175	53	84	220
Sulfide	mg/L	NA	0.43	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	585	657	627	703	720	657	658	55	585	720
METALS											
Antimony	mg/L	NA	**0.010**	0.008	0.008	**0.00018**	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	**0.002**	**0.001**	**0.001**	0.002	0.002	0.002	0.001	0.001	0.002
Barium	mg/L	NA	**0.077**	0.0009	0.082	**0.071**	0.077	0.077	0.006	0.071	0.082
Beryllium	mg/L	NA	0.00032	0.00032	0.00032	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	NA	81	98	94	86	90	90	8	81	98
Chromium	mg/L	NA	**0.005**	0.004	0.004	**0.00039**	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00042**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.009**	0.003	0.003	**0.00085**	NC	NC	NC	NC	NC
Lead	mg/L	NA	0.004	0.0004	**0.0007**	0.000098	NC	NC	NC	NC	NC
Magnesium	mg/L	NA	30	34	35	33	34	33	2	30	35
Mercury	mg/L	NA	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	0.003	0.003	0.003	**0.0028**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0006	0.0006	0.0006	**0.0014**	NC	NC	NC	NC	NC
Silver	mg/L	NA	**0.006**	0.003	**0.005**	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	NA	67	76	73	80	75	74	5	67	80
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	0.002	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	0.010	0.003	0.010	**0.0092**	0.010	0.0097	0.0005	0.0092	0.010
Zinc	mg/L	NA	**0.0066**	**0.0020**	0.0050	**0.0093**	0.0058	0.0057	0.0031	0.0020	0.0093
VOLATILE ORGANIC COMPOUNDS (µg/L): ND											
Acetone	µg/L	**4.8**[a]	0.5	5.935	5.935	4.2	NC	NC	NC	NC	NC
Carbon Disulfide	µg/L	0.54	0.5	6.4[a]	0.266	0.26	NC	NC	NC	NC	NC
Toluene	µg/L	0.11	0.5	0.047	0.047	**0.33**	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	**3.2**[a]	0.33	**0.38**[a]	2.0	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit. Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-18
GREGORY CANYON LANDFILL
HISTORICAL SUMMARY DATA - SURFACE WATER STATION SW-2

ANALYTE	UNITS	Aug 1999	Dec 2000	Mar 2001	Jun 2001	Sep 2001	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY											
Chloride	mg/L	96	105	109	111	120	109	108	9	96	120
Cyanide	mg/L	NA	0.0063	0.0063	0.0063	0.0006	NC	NC	NC	NC	NC
Nitrate/Nitrite	mg/L	0.3	**0.021**	0.020	**0.030**	**0.15**	0.09	0.12525	0.1305	0.021	0.3
pH	units	7.40	7.92	7.96	7.86	6.9	7.86	7.608	0.46	6.9	7.96
Sulfate	mg/L	171	185	184	195	210	185	189	15	171	210
Sulfide	mg/L	NA	0.050	0.050	0.050	0.1	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	622	660	623	700	730	660	667	48	622	730
METALS											
Antimony	mg/L	NA	**0.020**	0.008	0.008	0.00012	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	**0.0009**	**0.001**	0.0007	**0.0016**	0.001	0.001	0.0004	0.0009	0.0016
Barium	mg/L	NA	**0.080**	0.0009	0.088	**0.082**	0.08	0.08	0.004	0.08	0.088
Beryllium	mg/L	NA	0.00032	0.00032	0.00032	0.00042	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Calcium	mg/L	NA	78	97	96	91	93.5	90.5	8.7	78	97
Chromium	mg/L	NA	0.004	0.004	0.004	0.00012	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	0.002	0.002	0.002	**0.00047**	NC	NC	NC	NC	NC
Copper	mg/L	NA	**0.008**	0.003	0.003	**0.00092**	NC	NC	NC	NC	NC
Lead	mg/L	NA	0.004	0.0004	0.0004	0.000098	NC	NC	NC	NC	NC
Magnesium	mg/L	NA	29	35	36	33	34	33.3	3.1	29	36
Mercury	mg/L	NA	0.00010	0.00010	0.00010	0.00043	NC	NC	NC	NC	NC
Nickel	mg/L	NA	0.003	0.003	0.003	**0.0031**	NC	NC	NC	NC	NC
Selenium	mg/L	NA	0.0006	0.0006	0.0006	**0.0010**	NC	NC	NC	NC	NC
Silver	mg/L	NA	**0.004**	0.003	**0.006**	0.000098	NC	NC	NC	NC	NC
Sodium	mg/L	NA	65	76	75	80	75.5	74	6.4	65	80
Thallium	mg/L	NA	0.020	0.0007	0.0007	0.000063	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	0.006	0.002	0.000083	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	**0.008**	0.003	**0.008**	**0.0064**	0.008	0.0075	0.0009	0.0064	0.008
Zinc	mg/L	NA	**0.0067**	0.00089	**0.0014**	**0.0074**	0.0067	0.0052	0.0033	0.0014	0.0074
VOLATILE ORGANIC COMPOUNDS (µg/L): ND											
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	**0.55**[a]	0.33	NA	2.0	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES, & PCBs (µg/L): ND											

NOTES:

NA = Not Analyzed/Not Applicable

Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

NC No calculation performed. Requires a minimum of three data entries.

[a] Suspected laboratory/field contaminant.

TABLE 2-19
GREGORY CANYON LANDFILL
SURFACE WATER COMPARISON DATA
DOWNSTREAM VS. UPSTREAM MEDIAN

ANALYTE	DOWNSTREAM LOCATION SLRSW-2 MEDIAN	UPSTREAM LOCATION SLRSW-1 MEDIAN	ARARs	BASIN OBJECTIVES
GENERAL CHEMISTRY (mg/L):				
Chloride	109	107	500 **(2)	250
Cyanide	NC	NC	0.2 (1,3)	NV
Nitrate/Nitrite	0.09	0.079	45 (1,3)	NV
pH (units)	7.86	7.92	NV	NV
Sulfate	185	185	500 **(2)	250
Sulfide	NC	NC	NV	NV
Total Dissolved Solids (TDS)	660	657	1000 **(2)	500
METALS (mg/L):				
Antimony	NC	NC	0.006 (1,3)	NV
Arsenic	0.001	0.002	0.01 (1,3)	0.01
Barium	0.08	0.077	1(1) / 2(3)	1
Beryllium	NC	NC	0.004 (1,3)	NV
Cadmium	NC	NC	0.005 (1,3)	0.005
Calcium	93.5	90	NV	NV
Chromium-Total	NC	NC	0.05(1) / 0.1(3)	0.05
Cobalt	NC	NC	NV	NV
Copper	NC	NC	1.0(2)	1.0
Lead	NC	NC	0.015 (1,3)	0.015
Magnesium	34	34	NV	NV
Mercury	NC	NC	0.002 (1,3)	0.002
Nickel	NC	NC	0.1 (1)	0.1
Selenium	NC	NC	0.05 (1,3)	0.05
Silver	NC	NC	0.1 (2)	0.1
Sodium	75.5	75	NV	NV
Thallium	NC	NC	0.002 (1,3)	0.002
Tin	NC	NC	NV	NV
Vanadium	0.008	0.010	NV	NV
Zinc	0.0067	0.0058	5.0 (2)	5.0
VOLATILE ORGANIC COMPOUNDS (µg/L):				
Acetone	ND	**4.8**	NV	NV
Carbon Disulfide	ND	6.4	NV	NV
Toluene	ND	**0.33**	150 (1)/1000(3)	150
SEMI-VOLATILE ORGANIC COMPOUNDS (µg/L):				
bis (2-Ethylhexyl) phthalate	**0.55**	**1.79**	4(1)/6(3)	4
HERBICIDES, PESTICIDES & PCBs (µg/L): ND				

NOTES:

NC No calculation performed. Requires a minimum of three data entries.

NV No value available (in ARAR or Basin Objectives column).
ARAR = Applicable or Relevant and Appropriate Requirement.

** Value shown is the upper maximum contaminant limit (MCL).

(1) California Primary Drinking Water Standards.

(2) California Secondary Drinking Water Standards.

(3) Federal Maximum Contaminant Levels (MCLs).

[ ] Indicates that the analyte was not detected above laboratory practical quantitation limit.
Value listed is laboratory detection limit or estimated trace (BOLDED) concentration.

ND Not detected above the method detection limit

TABLE 2-20
SITE MONITORING WELL INFORMATION
GREGORY CANYON LANDFILL

WELL INFORMATION	GLA-1	GLA-2	GLA-3	GLA-4	GLA-5	GLA-7	GLA-8	GLA-9	GLA-10	GLA-11	GLA-12	GLA-13	GLA-14	GLA-16
Elevation of Well (feet MSL):														
Top of Well Casing	343.72	379.45	332.02	904.99	927.92	402.85	633.11	615.61	326.59	777.32	345.79	358.15	334.13	307.54
Total Depth of Well (ft.): At installation	300	250	150	250	195	160	300	300	150.0	243	53	70	56	33.5
Depth of Screened Interval	20-300	10-250	45-150	30-240	30-190	30-160	15-300	20-300	50-150	202.5-242.5	32-52	49.5-69.5	35.5-55.5	9.5-29.5
Depth to Water (from top of well casing (ft.)):														
12/3/96	37.98	69.65	21.81	165.00	41.44	33.46	62.48	-	-	-	-	-	-	-
12/16/96	37.10	69.73	23.84	149.93	42.57	34.82	62.40	Dry	22.20	-	-	-	-	-
9/13/99	39.36	70.58	25.38	70.57	41.22	37.72	64.85	Dry	23.27	-	-	-	-	-
3/14/00	38.05	71.11	23.66	60.39	41.29	39.11	63.70	Dry	22.01	193.36	36.96	49.25	38.18	13.92
11/14-15/00	38.82	72.36	24.80	62.53	39.80	41.58	66.21	Dry	22.66	194.98	38.08	50.52	38.89	15.35
12/5-6/00	-	72.23	-	64.71	40.54	-	-	Dry	23.30	195.30	37.96	50.54	38.73	15.06
1/30/01	40.25	72.99	26.78	76.25	40.55	43.43	67.86	Dry	23.05	195.72	37.98	50.55	38.58	14.91
2/26/01	40.09	72.98	26.74	71.60	41.42	43.72	68.13	Dry	22.93	195.59	37.93	50.52	38.51	14.82
3/12/01	39.99	72.95	26.57	70.50	40.58	43.82	67.50	Dry	22.73	195.57	37.79	50.38	38.41	14.60
4/13/01	40.08	73.08	26.55	148.69	40.28	43.92	67.23	Dry	22.71	195.36	37.83	50.37	38.35	14.62
5/14/01	40.22	73.19	26.78	98.09	40.71	44.18	67.67	Dry	23.01	196.36	37.97	50.57	38.50	14.82
6/20/01	40.62	73.25	27.11	74.50	39.66	44.40	68.57	Dry	23.19	196.25	38.66	50.73	38.66	15.07
7/11/01	40.63	73.43	27.24	128.18	40.10	44.54	68.98	Dry	23.54	196.86	38.40	51.00	38.83	15.31
8/29/01	40.80	73.62	27.56	76.72	41.13	44.95	69.67	Dry	23.68	196.74	38.64	51.24	39.05	15.69
9/5/01	40.72	73.53	26.91	74.25	41.16	44.71	67.95	Dry	22.96	196.63	38.62	51.20	39.05	15.73
10/29/01	40.80	73.90	27.54	75.43	41.43	45.50	70.06	Dry	23.55	196.98	38.73	51.37	39.27	16.03
11/28/01	40.68	73.88	27.5	73.64	42.11	45.77	69.92	Dry	23.36	197.08	38.65	51.36	39.05	15.46
12/11/01	40.55	73.25	27.37	73.06	42.25	45.80	69.80	Dry	22.49	196.62	38.55	51.18	38.89	15.20
3/29/02	40.70	73.98	27.48	70.60	-	46.79	70.96	Dry	23.22	197.14	38.64	51.39	38.75	14.94
Elevation of Water Surface (ft. MSL):														
12/3/96	305.74	309.80	310.21	739.99	886.48	369.39	570.63	Dry	-	-	-	-	-	-
12/16/96	306.62	309.72	308.18	755.06	885.35	368.03	570.71	Dry	304.39	-	-	-	-	-
9/13/99	304.36	308.87	306.64	834.42	886.70	365.13	568.26	Dry	303.32	-	-	-	-	-
3/14/00	305.67	308.34	308.36	844.60	886.63	363.74	569.41	Dry	304.58	583.96	308.83	308.90	295.95	293.62
11/14-15/00	304.90	307.09	307.22	842.46	888.12	361.27	566.90	Dry	303.93	582.34	307.71	307.63	295.24	292.19
12/5-6/00	-	307.22	-	840.28	887.38	-	-	Dry	303.29	582.02	307.83	307.61	295.40	292.48
1/30/01	303.47	306.46	305.24	828.74	887.37	359.42	565.25	Dry	303.54	581.60	307.81	307.60	295.55	292.63
2/26/01	303.63	306.47	305.28	833.39	886.50	359.13	564.98	Dry	303.66	581.73	307.86	307.63	295.62	292.72
3/12/01	303.73	306.50	305.45	834.49	887.34	359.03	565.61	Dry	303.86	581.75	308.00	307.77	295.72	292.94
4/13/01	303.64	306.37	305.47	756.30	887.64	358.93	565.88	Dry	303.88	581.96	307.96	307.78	295.78	292.92
5/14/01	303.50	306.26	305.24	806.90	887.21	358.67	565.44	Dry	303.58	580.96	307.82	307.58	295.63	292.72
6/20/01	303.10	306.20	304.91	830.49	888.26	358.45	564.54	Dry	303.40	581.07	307.13	307.42	295.47	292.47
7/11/01	303.09	306.02	304.78	776.81	887.82	358.31	564.13	Dry	303.05	580.46	307.39	307.15	295.30	292.23
8/29/01	302.92	305.83	304.46	828.27	886.79	357.90	563.44	Dry	302.91	580.58	307.15	306.91	295.08	291.85
9/5/01	303.00	305.92	305.11	830.74	886.76	358.14	565.16	Dry	303.63	580.69	307.17	306.95	295.08	291.81
10/29/01	302.92	305.55	304.48	829.56	886.49	357.35	563.05	Dry	303.04	580.34	307.06	306.78	294.86	291.51
11/28/01	303.04	305.57	304.52	831.35	885.81	357.08	563.19	Dry	303.23	580.24	307.14	306.79	295.08	292.08
12/11/01	303.17	306.20	304.65	831.93	885.67	357.05	563.31	Dry	304.10	580.70	307.24	306.97	295.24	292.34
3/29/02	303.02	305.47	304.54	834.39	-	356.06	562.15	Dry	303.37	580.18	307.15	306.76	295.38	292.60

- Not measured/not applicable.

D:\0539\GCLEV.XLS:5/19/03

TABLE 2-21
MONITORING WELL CONSTRUCTION DATA
GREGORY CANYON LANDFILL MONITORING WELLS

Well Number	Status	Casing Elevation (feet MSL)	Depth (in feet) To Bottom of Well	First Water	Static Water	Original Well Construction Diameter & Material	Filter Pack	Slot Size	Screen Interval	Drilling Method	Aquifer Material
Detection Monitoring Wells											
GMW-1	Compliance	331.36	90.5	21.25	22.48	Open Hole	None	NA	48-90.5	Air Rotary	Bedrock
GLA-4	Background	904.99	250	103	149.93	Open Hole	None	NA	30-240	Dual Wall Rev. - Air	Bedrock
GLA-5	Background	927.92	195	100	42.57	Open Hole	None	NA	30-190	Dual Wall Rev. - Air	Bedrock
GLA-11	Background	777.32	243	231	191.5	2" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	202.5-242.5	Air Rotary	Bedrock
GLA-12	Compliance	345.79	53	38	36.7	2" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	32-52	Air Rotary	Bedrock
GLA-13	Compliance	358.15	70	58	49.7	2" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	49.5-69.5	Air Rotary	Bedrock
GLA-14	Compliance	334.13	56	42	36.5	2" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	35.5-55.5	Air Rotary	Bedrock
GLA-A (Proposed)	Compliance	370 (est.)	-	-	65 (est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	60-90	Air Rotary	Bedrock
GLA-B (Proposed)	Compliance	345 (est.)	-	-	35 (est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	30-50	Air Rotary	Bedrock
GLA-2R (Proposed)	Compliance	375 (est.)	145	-	70 (est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	80-145	Air Rotary	Bedrock
GLA-2S (Proposed)	Compliance	373 (est.)	75	-	65(est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	50-75	Air Rotary	Bedrock
GLA-3S (Proposed)	Compliance	330 (est.)	45	-	25 (est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	20-45'	Air Rotary	Bedrock
GLA-17(Proposed)	Background	585 (est.)	-	-	-	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	50 feet	Air Rotary	Bedrock
GLA-18(Proposed)	Background	915 (est.)	-	-	-	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	50 feet	Air Rotary	Bedrock
Lucio #2R (Proposed)	Background	305 (est.)	40	-	15 (est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	30 feet	Hollow-Stem Auger	Alluvium
GMW-3	Compliance	320.36	49.5	12.83	12.38	4" Dia. Sch. 40 PVC	2/12 Sand	0.020"	9.5-49.5	Hollow-Stem Auger	Alluvium
GLA-16	Sentry	307.54	33.5	10.6	13	2" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	9.5-29.5	Air Rotary	Alluvium
SLRMWD #34R (Proposed)	Sentry	310 (est.)	45	-	20 (est.)	4" Dia. Sch. 40 PVC	#3 Monterey Sd.	0.020"	30 feet	Hollow-Stem Auger	Alluvium
Water Level Measuring Stations (wells GLA-7 and GLA-8 will be abandoned prior to landfilling in that area)											
GLA-1	-	343.72	300	210	37.1	Open Hole	None	NA	20-300	Dual Wall Rev. - Air	Bedrock
GLA-7	-	402.85	160	50	34.82	Open Hole	None	NA	30-160	Dual Wall Rev. - Air	Bedrock
GLA-8	-	633.11	300	86	62.4	Open Hole	None	NA	15-300	Dual Wall Rev. - Air	Bedrock
GLA-10	-	326.59	150	33	22.2	Open Hole	None	NA	50-150	Dual Wall Rev. - Air	Bedrock

Notes: R indicates proposed replacement well to be constructed in vicinity of the existing groundwater monitoring well.
GLA-2 and GLA-3 will be abandoned once their replacement wells are successfully completed and tested.
GLA-7 and GLA-8 will bbe abandoned once landfilling reaches the vicinity of these wells.

SECTION 3.0

GEOTECHNICAL ANALYSIS

3.0 GEOTECHNICAL ANALYSIS

This chapter discusses the results of the geologic and hydrogeologic investigations that were incorporated into the various geotechnical analyses required to support the currently proposed prescriptive design for the Gregory Canyon Landfill. Specifically, this section of the report provides the results of static and dynamic slope stability analyses, a discussion of liquefaction analyses for the alluvial material at the toe of the landfill, an assessment of rockfall and debris flows, settlement analysis over a period of 60 years, and model results for the generation of leachate by the landfill.

3.1 LINER SYSTEM DESIGN

The currently proposed landfill design includes the excavation of alluvial and colluvial deposits, and sufficient bedrock materials to create a subgrade at a minimum of 5 feet above the highest anticipated groundwater elevation. As shown on Figure 3-1, the bottom area of the footprint will be graded to drain northerly at a minimum gradient of three percent. The interior side slopes will be cut at a gradient no steeper than 1:1 (horizontal to vertical). The elevations of the finished bottom subgrade or floor area for the refuse footprint range from between approximately 380 feet amsl at the northwestern corner to about 750 feet amsl in the southern portion of the floor area.

The composite liner system proposed for the GCLF will include a GCL (a geocomposite clay liner) sandwiched between an upper 80-mil high density polyethylene (HDPE) geomembrane and a lower 60-mil HDPE geomembrane liner. On the floor areas, the encapsulated GCL will overlie a nine-inch drainage (leak detection) layer over a 60-mil HDPE geomembrane liner, all of which will overlie a compacted low permeability soil layer. As shown on Figure 3-2, from top to bottom, the components for the proposed composite liner system include the following:

- 24-inch-thick protective soil cover
- 12 oz. geotextile (on floor areas only)
- 12-inch thick LCRS gravel layer (on floor areas only)
- 16 oz. cushion geotextile
- 80-mil HDPE geomembrane, textured as required
- Geocomposite Clay Liner (GCL)
- 60 mil HDPE geomembrane textured both sides
- 16 oz. geotextile
- 9-inch minimum thickness gravel or equivalent drainage layer, with a collection pipe (on floor areas only)
- 16 oz. geotextile (on floor areas only)
- 60-mil HDPE geomembrane, textured both sides (on floor areas only)
- 24-inch-thick low permeability soil layer
- 12 oz. geotextile (on floor areas only)
- 12-inch-thick subdrain gravel layer (on floor areas only)

The subdrain system, though not expected to contain groundwater, has been included in the landfill design to collect and control groundwater, if it intersects the subgrade excavation along the bottom. The subdrain system will be placed beneath the composite liner and will consist of a one-foot-thick gravel blanket and gravel-filled trenches with slotted collector pipes in the bottom areas. The subdrain system is a redundant system in which the permeable gravel pack and the pipe can both convey over a million gallons of groundwater per day by gravity flow to the mouth of the canyon where it will be captured in a collection tank. On the side slopes, if a groundwater seep is identified, depending on the measured flows, either a geonet or trench-type collector chimney drain will be constructed, for lower flow seeps, a geonet strip collector will be used . The collector will be placed from the seep to the next lower bench into a section of slotted pipe surrounded with gravel and wrapped in geotextile. The slotted pipe will transition to solid pipe gravity flowing to the bottom subdrain system. For higher flow seeps, a trench collector type chimney drain will be constructed by first cutting a trench into the side slope from the next lower bench up to the seep. The trench will be filled with gravel and wrapped with geotextile. A perforated pipe can also be added for additional flow capacity. The trench size will be dictated by flow rates. The trench collector will connect at the bench and eventually to the bottom subdrain system similar to the geonet collector.

In floor areas, a 12 ounce geotextile layer separates the 12-inch thick subdrain gravel from the 24-inch low-permeability soil layer. The low-permeability soil layer will be compacted to a minimum of 90% relative compaction (per ASTM D1557) and yield a maximum hydraulic conductivity of 1×10^{-7} cm/sec.

A 60-mil HDPE geomembrane, textured on both sides, will be placed above the low-permeability soil and provides both a low permeability and high resistance to chemicals. The complementary physical and hydraulic properties associated with the combination of a geomembrane and low permeability soil result in a very low potential for leakage, many times lower than that of either layer alone.

In the floor areas a 16 ounce geotextile overlies a drainage (leak detection) layer, which consists of a nine-inch minimum thickness of gravel or equivalent with a collection pipe to create the drainage (leak detection) layer. The drainage layer will then be overlain by a 16 ounce geotextile and a 60- mil HDPE geomembrane, textured on both sides. The texturing improves the interface shear strength between the geomembrane and the geotextile below and the GCL above. The geomembrane will be constructed so that its liner seams will be offset from the seams in the lowermost geomembrane (below the drainage layer).

A geocomposite liner (GCL) will be placed above the geomembrane. The GCL is a commercially manufactured liner material containing sodium bentonite. It can be attached directly to the geomembrane or be sandwiched between two geotextiles. The hydraulic conductivity of a typical GCL is on the order of 5×10^{-9} cm/sec. The GCL is dry when it is placed and therefore, the bentonite in the GCL has the ability to swell and self-heal and can deform and stretch significantly without losing its hydraulic integrity.

An 80-mil HDPE geomememembrane, textured on both sides in the floor areas, will be placed above the GCL. On the slopes, the upper (80 mil) HDPE geomembrane will consist of a single-side textured product placed with the textured side down. As with the HDPE geomembrane beneath the GCL, this geomembrane provides additional protection to the low-permeability GCL by its high resistance to chemicals and lower permeability. The thicker 80-mil HDPE geomembrane liner also provides added resistance to punctures or damage by surface construction activities following its placement. The texturing improves the interface shear strength between the geomembrane and the geotextile above and the GCL below. This uppermost geomembrane will be constructed so that its liner seams will be offset from the seams in the underlying geomembrane (below the GCL). A brief discussion of the performance advantage of the GCL sandwich design is provided in a letter to Gregory Canyon Ltd. (April 2004).

A Leachate Collection and Removal System (LCRS) will be installed over the 80-mil geomembrane liner to collect and convey leachate that may be generated within the refuse prism. In the floor areas, the system will consist of a one-foot thick gravel layer and HDPE pipe over the entire bottom area, while the slope areas will consist of gravel pipe and gravel collectors wrapped with a geotextile fabric placed on the interior benches. The bottom and slope collectors will be interconnected to convey leachate by gravity flow to the mouth of the canyon to be discharged into two double-walled collection tanks. Though the LCRS system has been designed to prevent clogging of gravel and the pipe layer, in the event of system back-up, clean-outs will be available that can be periodically flushed. In the event of pipe failure, the surrounding gravel layer also has the capacity to convey the leachate to an adjacent pipe or outlet system.

A protective soil cover consisting of a minimum two-foot thick soil layer will be placed over the entire liner and/or LCRS. A 12 ounce geotextile will separate the protective cover from the underlying LCRS/liner.

3.2 SUPPORTING FACILITIES/LANDFILL COMPONENTS

The following section provides a description of additional landfill support facilities and components that require geotechnical analyses or evaluation including the ancillary facilities area (liquefaction analysis), borrow/stockpile areas (slope stability), the access roads and bridge (construction considerations).

3.2.1 Ancillary Facilities

The ancillary facilities area will be located at the toe of the landfill and cover an area of about 12 acres. It will include the fee booth and scales, the administrative office building (located adjacent to the fee booths), and an approximately 7,000 square foot maintenance building. A diesel storage tank within a concrete containment wall will be located on the south side of the maintenance building for refueling of equipment. A portable emergency showerhead designated to contain rinse water will also be provided outside the maintenance building.

A recyclable drop-off area is proposed on the east side of the maintenance building with bins for drop-off of source separated recyclable material, such as newsprint, white paper, tin, aluminum, and glass. White goods will also be accepted and stored near the recycled bins area. Although hazardous materials will be prohibited at Gregory Canyon Landfill, a hazardous materials storage area, located in the southeastern portion of the ancillary facilities area, will be maintained for use if such materials are found in loads coming to the landfill.

Two 10,000-gallon leachate holding tanks and one 10,000-gallon subdrain water tank will be located in the southwestern corner of the ancillary facilities area. A 20,000 gallon water tank will also be located just north of the paved area. The water tank will be supplied from on-site groundwater wells.

3.2.2 Borrow/Stockpile Areas

Approximately 87 acres of borrow/stockpile area will be provided at two locations to the west of the proposed landfill footprint (Figure 2-7). Borrow/Stockpile Area A, which is about 22 acres in size, is located west of the landfill footprint adjacent to the western property boundary. The maximum height of Borrow/Stockpile A ranges from about 320 to 500 feet amsl. Borrow/Stockpile Area B, which is about 65 acres in size, is located immediately to the west of the southern portion of the landfill footprint. The maximum height of the Borrow/Stockpile Area B ranges from about 940 to 1,020 feet amsl.

The borrow/stockpile areas will be used to store and/or excavate material that will be needed in the daily operation of the landfill. During the initial excavation of Phase I of the refuse footprint, a portion of the excavated material will be used for the engineered fill necessary to construct the ancillary facilities area. The remainder of the material will be stockpiled in the landfill footprint or Borrow/Stockpile Area A (Figure 2-7). Borrow/ Stockpile Area A will be used for stockpiling only during the initial construction after which the area will be closed and revegetated with native plant species. Area A will not be used again for about 25 years at which time material will be used from Area A for cover. In the interim, material will be stockpiled within the footprint or in Borrow/Stockpile Area B.

A geophysical study of the borrow areas was conducted to evaluate the rippability of the soil for use by the landfill (GLA, 1998). On the basis of these studies, Borrow Area A is considered rippable to an average depth of 80 feet, and Borrow Area B is considered rippable to an average depth of 75 feet. These rippable depths suggest that approximately 1.3 million cubic yards of material can be excavated from Borrow Area A with conventional earth-moving equipment. Borrow Area B is to be excavated to a depth of about 150 feet and is expected to yield up to 3.2 million cubic yards of material. Though the footprint for the maximum depths is relatively small, deep excavation may require the use of explosives.

Proper drainage control will be maintained in the borrow/stockpile areas. Surface water control features will include grading of the flatter deck areas to promote lateral runoff of

precipitation into drainage control facilities such as downdrains and bench drains on the slopes. Surface waters will be collected and conveyed from the borrow/stockpile areas and discharged into the existing natural drainage courses. Erosion control measures such as desilting basins, sandbags, straw matting and/or rip-rap will be utilized to reduce downstream siltation potential. Discharge rates will be equal to or less than natural flow conditions.

Borrow/Stockpile Area B will drain to the southwest into a natural drainage course. At the western end of the Borrow/Stockpile Area B, a desilting basin will be constructed to minimize the flow of silt from the borrow/stockpile area. The desilting basin will be designed to accommodate the soil loss from the borrow/stockpile areas. The drainage course for Borrow/Stockpile Area A runs northwesterly. The drainage control facilities will direct the surface runoff into the existing streams.

Interim drainage and erosion control features (e.g., silt fences) will be constructed for the borrow/stockpile areas, as necessary. Construction and operation of all drainage facilities will adhere to the BMPs developed as part of the Storm Water Pollution Prevention Program Plan (SWPPP) in compliance with State and Federal regulations under the National Pollutant Discharge Elimination System (NPDES) program. The pre-developed drainage condition of the area will be reconstructed as closely as possible once operations are discontinued in each of the borrow/stockpile areas. Exposed areas will be revegetated with native plant species to prevent erosion.

3.2.3 Access Roads/Bridge

The proposed access road from SR 76, which will extend through the abandoned Lucio dairy to the ancillary facilities area, will be two to three lanes and will include a bridge over the San Luis Rey River. The access road from SR 76 to the bridge will be about 910 linear feet and will be 32 feet wide, with two twelve-foot travel lanes and a four-foot shoulder on each side. The access road from the bridge into the ancillary facilities area will be about 985 linear feet and will be 36 feet wide, with three lanes (two travel lanes and a center lane) and a four foot shoulder on each side.

The bridge will be approximately 680 feet long, with five 7-foot diameter supporting piers, which will form the base of the structure. The 35.5-foot wide bridge will have two travel lanes and will maintain a 17.5-foot clearance between the proposed finished channel bottom and the underside of the bridge. The side slopes at the bridge abutments will be graded to a maximum 2.5:1 slope gradient and will be stabilized with rip-rap to prevent erosion.

3.3 STABILITY ANALYSES

The following sections provide the results of geotechnical slope stability analyses that were performed for the design of the proposed landfill and key appurtenant facilities of the project, described above. The geotechnical analyses include static stability of the cut slopes and the refuse prism, the dynamic stability of the refuse prism and the potential for rockfall to occur from the surrounding highlands and impact the landfill.

3.3.1 Stability of Cut Slopes

The three most common types of cut-slope failures are block-slip failures, wedge-slip failures, and circular failures. Block-slip failures are most common in slopes that are underlain by bedrock with distinctive partings (e.g., fractures) that dip in the same direction but at a shallower angle than the cut. Wedge-slip failures occur when the bedrock has two or more partings (e.g., a weathered dike and a joint) with orientations such that their line of intersection dips at a shallow angle in the direction of the cut. Finally, circular failures develop where the substrate is loosely consolidated and comparatively homogeneous. Rocks exposed in Gregory Canyon are compact and cohesive, even when weathered, so a circular failure of the cut slopes is unlikely and will not be considered below.

A kinematic analysis of cut slopes for the proposed landfill development was conducted and utilized the fracture data from 424 measurements in bedrock outcrop and bore hole imaging probe data generated from 12 borings (GLA, 1998). The kinematic analysis showed that large-scale block-slip movement and wedge-failure are not likely given the geometry of the dominant directions of discontinuity in Gregory Canyon identified by the geologic investigations. Mapping should be performed and this conclusion reevaluated as the excavation proceeds. It is also possible that small-scale, localized block falls may occur when fractures daylight the cut or where a higher density of fractures are encountered during excavation.

A study conducted by Woodward-Clyde Consultants (1995) concluded that 2:1 slopes on the east-facing slopes adjacent to the aqueduct are appropriate with a factor of safety of at least 1.5 under static conditions. In response to concern about the stability of the first San Diego Aqueduct during an earthquake event, GLA also performed a pseudo-static analysis of the proposed east-facing cut slopes (adjacent to the aqueduct). Static analysis of modeled wedges indicates a factor of safety of 5.9. This means that the forces resisting movement are approximately six times greater than the forces causing movement. When subjected to ground acceleration associated with the Maximum Credible Earthquake (0.4g), the factor of safety also exceeds the prescriptive 1.5 dynamic factor of safety for all landfill foundation and final fill slopes required by 27 CCR.

<u>Borrow/Stockpile Areas</u>. Within the borrow/stockpile areas, block-slip failures, wedge-slip failures, and circular failures were all assessed (GLA, 1998). Based on the kinetic considerations and structural features of the rocks exposed at Gregory Canyon, it was

concluded that block failures, wedge-slip failures and circular failures of cut slopes with 2:1 (H:V) slopes are not likely. As a result, cut slopes for borrow excavations, will be made at a maximum gradient of 2:1 (H:V).

3.3.2 Stability of the Stockpile Slopes

Stockpiles will be placed in the borrow areas at a maximum slope gradient of 3:1 (H:V) and a maximum height of no more than 300 feet. The computer program SLOPE/W was used to analyze the static stability for two cross-sections through these slopes (Figure 2-7). Based on the nature of the materials anticipated to be placed in the stockpiles, a unit weight of 120 pcf, a friction angle of 32° and cohesion of 250 psf were considered reasonable and were used in the slope stability analysis. Results of the analysis (Figures 3-3A, and 3-3B) indicated a calculated minimum static factor of safety of 1.9. Based on this evaluation, the stockpile slopes were considered to have adequate stability.

3.3.3 Stability Analysis of the Refuse Slopes

The bottom grade for the liner, the liner system details, and the finished grades were provided and are presented on Figures 3-1 and 3-2 (BAS, 2003). The interface strengths for each of the liner components can be measured and expressed in terms of standard Mohr-Coulomb strength envelopes (stated in terms of an angle of internal friction and cohesion or adhesion). For the purpose of performing slope stability calculations discussed herein, only the weakest or most critical elements of the liner system have been used. For analysis, the critical elements of the refuse slopes and liners are the refuse fill and the interface between the non-woven geotextile and the HDPE membrane. The parameters used in the analyses and derived primarily from published data (e.g., Serrot International) were:

Material	Unit Weight	Friction Angle	Cohesion
Refuse Fill	80 pcf	30°	200 psf
Smooth HDPE/Geotextile	NA	8°	0 psf
Textured HDPE/Geotextile	NA	14°	0 psf

Geometry. Cross section A-A' shows the final grade profile of the GCLF along the approximate center of Gregory Canyon and shows the proposed landfill configuration and incorporates the most critical section with regard to slope stability for the site (Figure 3-4).

Static Analyses

Slope stability analysis was conducted using the computer program SLOPE/W (Geo-Slope, 1995). Analytical methods available in the program include Bishop method for circular failure modes, and Spencer and Morgenstern and Price methods for general failure modes including block and non-circular failure surfaces. The analysis computes the factor of safety against failure using limit equilibrium procedures. Input parameters required for the analysis include the geometry of the slope, the unit weights and shear strengths (angle of internal friction and cohesion) of the various materials and interfaces in the slope and pore water pressure conditions, if appropriate.

Figures 3-5 shows the critical failure plane for section A-A, and the static factor of safety for this configuration is calculated to be greater than 1.50.

Dynamic Analysis

Current practice for evaluating dynamic slope stability under seismic loading conditions involves two steps: (1) pseudo-static analysis; and (2) more detailed analysis, if step (1) indicates a factor of safety less than 1.5.

In the pseudostatic analysis, the dynamic inertial forces induced by the design earthquake are represented by a constant, equivalent static horizontal force, determined by multiplying the weight of the slope by a seismic coefficient (k). This is a simplified representation of a complex dynamic condition (hence the term 'pseudostatic'). It is customary in the practice, to use a seismic coefficient (k) of 0.15 for slope stability analysis.

If the pseudostatic slope stability analysis calculates a factor of safety of 1.5 or more, the slope is considered to have adequate stability under seismic loading conditions. Otherwise, Title 27 requires that further analysis be done, as step (2) to demonstrate that the proposed design will be functional during the design earthquake for the project (the Maximum Credible Earthquake [MCE] for the GCLF). This additional analysis may include determination of seismic-induced permanent displacement.

Pseudostatic analyses for section A-A' indicates a factor of safety of 0.85 with a seismic coefficient of 0.15 (Figure 3-6). Since the calculated factor of safety is less than 1.5, additional pseudostatic analysis was completed and included estimation of the seismic-induced permanent displacement due to the MCE.

In evaluating seismic displacement, the procedure by Bray and Rathje (1998) was used to estimate seismic-induced permanent displacement during the MCE. The procedure is based on the one described by Newmark (1965) for determining displacement of a rigid block resting on a sliding plane subjected to earthquake-type motions. The procedure first requires determination of "yield acceleration" (i.e., the value of seismic coefficient (k_y) that yields a factor of safety of 1.0 in conventional slope stability analysis). This procedure is then based on the premise that the sliding block will undergo displacement only during periods when the maximum ground acceleration (k_{max}) exceeds the yield acceleration (k_y) for the sliding block. As a result, no displacements occur when k_y is greater than k_{max} (i.e., $k_y/k_{max} > 1$). Bray and Rathje refined the procedure for solid waste landfills to incorporate the dynamic response characteristics of the waste fill, and the intensity, frequency content, and duration of ground motion. The Bray and Rathje procedure yields results that are consistent with the observed performance of landfills during recent earthquakes.

The yield acceleration for section A-A is calculated to be 0.10g (Figure 3-7). Based on this yield acceleration, seismic-induced permanent displacement of the landfill slopes was estimated for the peak horizontal acceleration of 0.40g for the MCE event at the site (See Section 1.4.4). The following parameters were used:

- Slope Height - 300 feet
- Average Shear Wave Velocity of Refuse Fill – 1,200 feet/second (Bray and Rathje, 1998)
- MCE - M7.1 event on the Elsinore Fault-Julian Segment a distance of 6 miles from the site
- MCE Site Acceleration – 0.40g
- Mean Period of Shaking – 0.50 seconds (Bray et al, 1998)
- Significant Duration of MCE – 16 seconds (Bray et al, 1998)

Based on the analysis, the displacement calculated to occur to the total refuse prism and liner is approximately 0.1 inches for the prescriptive configuration. This is less than the commonly accepted maximum displacements for liner systems of 6 inches to 12 inches (Seed and Bonaparte, 1992). Attachment 5 provides the calculation used to determine the seismic-induced permanent displacement for the GCLF base liner along cross-section A-A'.

3.3.4 Stability of the Final Cover

In addition to an evaluation of the cut slopes, and refuse prism, stability analyses were performed for the proposed final cover system for closure of the GCLF. The proposed final cover design assumes a prescriptive low-permeability final cover in accordance with CCR 27. It consists of a two-foot foundation soil layer, a synthetic barrier layer, and a two-foot thick vegetative soil layer. The vegetative soil layer was assumed to consist of on-site soils that are silty sand to sandy silt and compacted to a minimum relative compaction of 90 percent. The barrier layer was assumed to consist of a 60-mil thick Linear Low-Density Polyethylene (LLDPE) geomembrane, textured on both sides. The foundation layer was assumed to consist of compacted random soil. The proposed final grading plan will have an overall slope gradient of 4:1 (horizontal: vertical) including roads and benches at approximately 40-foot vertical intervals and a gradient between benches of 3:1 (horizontal: vertical).

For the slope stability analysis, the interface between the LLDPE geomembrane and the overlying vegetative soil cover was considered the critical surface. The following parameters were considered appropriate and used in the analysis:

Thickness of vegetative soil layer	2 feet
Total density of soil in the vegetative layer	100 pcf
Angle of internal friction at the interface between soil and LLDPE geomembrane	27 degrees
Maximum ground acceleration for the postulated maximum credible earthquake (MCE) at the site	0.40g

The slope stability analysis was conducted considering the proposed final cover as a semi-infinite slope with a gradient of 3:1 (horizontal: vertical). For the design parameters listed above, the analysis indicated a static factor of safety of 1.53 if the tensile strength of the geomembrane is ignored, and 1.69 when considering the tensile strength of the LLDPE.

Since the pseudo-static factor of safety was less than 1.5 (see Attachment 5), an additional analysis was made to estimate the seismic induced permanent displacement during the postulated seismic exposure of the site using the procedure described by Makdisi and Seed (1978). The procedure first requires calculation of yield acceleration (k_y), the acceleration value for which a pseudo-static analysis yields a factor of safety of 1.0. K_y was evaluated and found to be equal to 0.185g. The ratio k_y/k_{max}, where k_{max} is the maximum ground acceleration at the site (0.40g), was then calculated. The value of the estimated permanent displacement was then read from a chart developed by Makdisi and Seed normalized for the period of the waste and related to the magnitude of the earthquake event. Using this procedure, the calculated seismic-induced permanent displacement for the final cover during the postulated maximum credible earthquake at the landfill ranges from 1.7 to 5.1 inches (Attachment 5) depending on the thickness of the waste prism. Using the methods of Bray and Rathje (1998), the seismic displacement under the loading of the MCE ranges from 0.5 to 3.7 inches, depending on the waste thickness (Attachment 5). These estimated displacements are less than the commonly acceptable range of seismic displacements of 6 to 12 inches and would not be expected to inhibit the functional integrity of the cover. Damage should be evident during post-earthquake inspection, and can be easily and quickly repaired as a part of post-earthquake maintenance. The seismic-induced permanent displacement calculations are provided in Attachment 5.

3.4 LIQUEFACTION SUSCEPTIBILITY

To aid in assessing the liquefaction potential of the alluvium underlying the site, the alluvial wedge was drilled, sampled and field tested to a depth of 50 feet at four different locations (Figure 1-2). Laboratory tests were then completed on representative samples in order to characterize the grain-size distribution of the alluvial soils (GLA, 1998). On the basis of the testing, it is concluded that the soils are predominantly silty sands and clayey sands with 14% to 45% silt and clay at the tested locations. A detailed discussion of analytical procedures employed in the liquefaction analysis is provided in GLA's geotechnical report (GLA, 1998). The following table summarizes the SPT data from Gregory Canyon, the cyclic stress ratios calculated for each SPT location, and the calculated factors of safety.

Boring Number	Depth in feet	Material	Percent fines	Depth to water table (ft)	C_d First cyclic-stress ratio	C_l Second cyclic-stress ratio	Factor of safety
Boring 1	20	SM	17%	19	0.199	0.300	1.50
	30	SM	19%	19	0.228	0.700	3.07
	40	SM		19	0.230	0.672	2.93
Boring 2	30	SP/SM	14%	25	0.204	0.280	1.37
	40	SM		25	0.211	0.669	3.16
Boring 3	25	SM-SC	45%	24	0.195	0.400	2.06
	35	SM-SC		24	0.211	0.671	3.18
	45	SM		24	0.208	0.357	1.72
	55	SM		24	0.188	0.630	3.34
Boring 4	35	SM-SC	20%	26	0.206	0.269	1.30
	45	SM-SC		26	0.202	0.651	3.22

Notes: C_d – Ratio of cyclic stress induced by the earthquake to effective normal stress
C_l - Ratio of cyclic stress required to induce liquefaction during the earthquake to effective normal stress.

The lowest calculated factor of safety is 1.30 (in Boring 4), and most other values are considerably higher. For liquefaction hazards, factors of safety ranging from 1.25 to 1.5 are generally considered acceptable and within the standard of practice (SCEC, 1999). We conclude that under existing conditions the liquefaction susceptibility of the alluvial wedge at Gregory Canyon is low, and not a significant impact to the project.

3.5 ROCKFALL AND DEBRIS FLOW ASSESSMENT

Rockfall

Rockfalls are abrupt movements of independent rock blocks detached from steep slopes. Falling rocks can reach the base of a slope by free-falling, bouncing, rolling down the slope surface, or by some combination of the above. Such independent rockfall movements differ from sliding failures that form on a slip surface of the rock slope in that they are much more sudden, and because falling rocks may possess a high degree of kinetic energy. If the failure involves a large volume of rocks, debris will cover a very wide area at the base of the slope.

Potential for rockfall was assessed using trajectory analysis of bounding rock fragments under the assumption of ideal elastic behavior for rock slopes. A representative cross-section of the Gregory Canyon from the summit of Gregory Mountain to the thalweg of Gregory Canyon was considered in this evaluation (GLA, 1998). The analyzed profile includes some of the steepest and longest slopes, and is relatively free of transverse features (e.g., ravines) that could otherwise act as catchment basins for rolling fragments. In considering the rockfall hazard, three scenarios were considered: (a) complete dampening of the kinetic energy once the particle landed in the comparatively soft refuse fill; (b) some of the kinetic energy of the falling rock fragments is dampened by impact; and (c) after the impact the fragment starts rolling down the slope (GLA, 1998).

Under the worst-case scenario, the maximum encroachment of a bouncing rock fragment onto the landfill was estimated to be about 300 feet onto the landfill and the travel time was estimated to be 22 seconds. Based on this analysis, construction of a "catching" wall or other diversion structure near the edge of the landfill is recommended to effectively mitigate the risk of rock fragments rolling onto the landfill. Rockfall trajectories can reasonably be expected to be even shallower and shorter for profiles with gentler slopes. The conclusions reached through the analysis of this profile are of general application throughout the eastern slope of the landfill site.

Debris flows

Earth, mud, and debris flows or debris avalanches form when a mass of unconsolidated sediment is mobilized by sudden ground vibration (e.g., an earthquake) or by a sudden increase in weight and pore water pressure (e.g., after soaking of the soil by heavy rain). Steep topography and deforestation enhance the initial movement of a flow, but once mobilized, flows can spread over gently sloping terrain. Johnson (1970) demonstrated that flows move by "plug flow", in which shear deformation is limited largely to the bottom of the moving mass. The bulk of the mass forms a "plug", in which shear stress is

less than the shear strength of the sediment/water mixture. As long as the thickness of the zone of no shear is less than the thickness of the flow, movement will occur, with the plug being passively rafted. If for some reason (e.g., dewatering of the soil mass, or decrease in slope) the thickness of the plug equals that of the flow, movement ceases. This sudden "freezing" of a flow explains the lack of internal stratification, poor sorting of the sediment, and the lobate, steep-sided morphology typical of debris flows.

Review of aerial photographs and geologic mapping of the site, indicate that there is a deposit of poorly-sorted colluvium that could have been formed as a debris flow deposit [Qd(?) on Plate 1; GLA (1998)]. The deposit forms a landform with a rough lobate shape and comparatively steep boundaries, but lacks levees or pressure ridges, and so could also have been formed by erosion of an older colluvial fan.

If not simply the result of erosion of an older colluvial fan, recent studies of the classification of flow type landslides suggest that the deposit identified within Gregory Canyon might be more typical of a debris avalanche (Hungr O., et al., 2001). Hungr et al. (2001) define a debris avalanche as being very similar to a debris flow with the exception that in the case of the debris avalanche, the flow is not confined to an established channel. In the case of a debris flow, the established channel is usually characterized by scour features along a gully path and by the presence of a well-defined depositional cone or fan built up by a number of separate events that follow this same path. In contrast, once the debris avalanche has occurred, it will not normally occur repeatedly at the same location, since depletion of material usually occurs.

It is recognized that the circumstances necessary to form a debris flow/avalanche include a source of loose debris that is typically mobilized by a significant water content, such as a saturated basal layer of material that becomes liquefied by over-riding and rapid loading (Hungr, O. et al, 2001). The susceptibility of the site to these mechanisms was estimated by looking for evidence of previous flow events. Characteristically, a bowl-shaped source area leads to a relatively narrow neck with a U-shaped cross-section. The depositional zone may have multiple lobes of debris overlapping one another, low mounds or levees mark lateral shear surfaces, and arcuate pressure ridges are sometimes seen over the surface of the flow. The deposits themselves are characteristically unstratified and poorly sorted. Sources that might have resulted in the formation of a historical debris avalanche could be the three "hanging" basins that drain the western summit of Gregory Mountain. These basins have gentle slope gradients in their head regions, but drain into the steep western flank of Gregory Mountain. A debris flow/avalanche mobilized within any of these basins would thus have moved rapidly down this steep flank, and accumulate at the toe of the slope, as exemplified, perhaps, by basin 1 and deposit Qd(?) (on Plate 1; GLA, 1998). However, these bowls contain no significant surficial soil deposits.

In siting the landfill within Gregory Canyon, the likelihood of future debris flows/avalanches must be evaluated. Today, most commonly debris flows/avalanches are triggered by a significant increase in saturation, which can buoy the debris down the slope and these types of events typically occur from a rapid snow melt, or in the Pacific

Northwest where heavy rains and flooding are more common. Even if there is an increase in annual rainfall within the vicinity of Gregory Canyon, the climatic conditions are not ideal for the development of repetitive debris flows/avalanches.

The most effective "mitigation" measure to minimize the potential debris flow/avalanche hazard is the natural development of vegetation within the drainage basins. In aerial photographs, these basins generally have a modest to dense development of vegetation along their tributaries and special precautions such as diversion structures near the upper reaches would need to be taken if vegetation is destroyed. The diversion structures should be built so as to be permeable, allowing almost free draining of runoff, but should capture high viscosity earth-, mud- or debris.

3.6 SETTLEMENT ANALYSIS

Refuse settlement in sanitary landfills can be a troublesome and unpredictable problem during the post-closure maintenance period. For example, drainage structures incorporated into the final cover design might become inoperative after a few years because settlement has modified or even reversed the drainage slopes. An analysis of potential settlement is thus a valuable planning tool for maintenance engineering. This section describes the landfill settlement that is estimated to occur in the GCLF during the 30-year period following landfill closure. The settlement analysis provided has been revised from an earlier analysis (GLA, February 1999) and reflects the proposed prescriptive landfill configuration for the 30-year post-closure period.

The mechanics of refuse settlement is complex due to the extreme heterogeneity of refuse fill. According to Edil et al. (1990), the main mechanisms involved in refuse settlement are:

- Mechanical distortion (bending, crushing, and reorientation)
- Raveling (movement of fines into large voids)
- Physical-chemical changes (corrosion, oxidation, and combustion)
- Biochemical decomposition (fermentation and decay)

The magnitude of refuse settlement can thus be inferred to be a function of: (1) the initial refuse density or solid/void ratio, (2) the overall density of the refuse prism or ratio of refuse to daily cover soil, (3) the content of decomposable materials in the refuse, (4) the thickness of refuse lifts and total height of the refuse prism, (5) the refuse prism stress history, (6) the time elapsed since each individual lift was placed, and (7) environmental factors such as moisture content, temperature, and gas content.

In our experience, the most consistent refuse settlement estimates are obtained by modeling the refuse prism as a 3-dimensional net, calculating the settlement at each node of the net with a time-dependant exponential decay function, and adding the total settlement for each column of the net at selected time intervals. Based on the work of Huitric (1981), settlement was modeled as an exponential decay function of the form:

$$\text{Remaining settlement} = aTe^{-bt}$$

where **a** and **b** are constants such that total expected settlement is a proportion (**a**) of the original thickness, (T), of a particular lift of refuse, and settlement occurs at an exponential rate of **bt**, where t is the time (in years elapsed), since the particular lift of refuse was placed. For a municipal solid waste landfill with standard compaction characteristics, **a** varies between 0.2 and 0.35, and **b** varies between 0.10 and 0.11. Since the GCLF master plan calls for a fairly high compaction ratio, a value of 0.25 was used for parameter **a**, and an intermediate value of 0.105 was used for parameter **b** (Figure 3-8).

In estimating post-closure settlement, a two-dimensional grid over the footprint of the refuse prism was established, with a nodal spacing of 250 feet (Figure 3-9; Table 1). The third dimension in the model net was then added to represent the change in elevation between discrete time intervals. As currently constructed, each "layer" of the model represents 3 to 4 years of landfilling (Table 3-1).

Figure 3-10 shows the landfill surface elevations at the time of landfill closure (approximately year 30), and Figures 3-11a through -11c depict the estimated landfill elevations 10, 20 and 30 years after closure, respectively. The calculated values for the nodes used to contour these figures are summarized in Table 3-2.

As shown on Figure 3-11c, total potential settlement during a 30-year post-closure period could be as much as 60 feet in the southern half of the landfill prism. This is less than the 140 feet estimated in the earlier settlement analysis (GLA, February 1999) for two reasons. First, the thickness of refuse has been reduced as the floor of the landfill has been raised; and second, a higher initial compaction has been assumed. In addition, the configuration of the refuse prism changes slightly with the "pyramid" that formed the apex eventually settling into a "deck". Even after 30 years, if proper maintenance is performed, surface grades should be sufficient to facilitate efficient drainage off the site.

3.7 LEACHATE GENERATION ANALYSIS

This section complements GLA's earlier leachate generation analysis report dated December 18, 1998 and includes a discussion of the results following extension of the model from a 20-year post-closure period to a 30-year post-closure period.

Modeling of potential leachate generation was performed using the United States Army Corps of Engineers HELP 3 (Hydrologic Evaluation of Landfill Performance) computer program, which uses representative rainfall and evapo-transpiration data to determine the amounts of leachate that might be generated in municipal solid waste landfills. The program takes into account the total area landfilled, representative precipitation patterns, representative evapo-transpiration, and the hydraulic conductivity of various construction materials to calculate leachate generation and accumulation.

Climate. The initial climate properties were selected from a table of default values included in the HELP 3 model. These default values were selected for the city of San Diego and were corrected for the latitude of the proposed Gregory Canyon Landfill.

Precipitation data were adjusted to a 60-year annual average of 19.3 inches, with a minimum yearly total of 8.36 inches and a maximum yearly total of 34.8 inches (Figure 3-12). In contrast, in the model provided earlier (GLA, 1998), the precipitation data were adjusted to a 50-year annual average of 18 inches, with a minimum yearly total of 4.40 inches and a maximum yearly total of 24.79 inches. The slightly different values arose when a new synthetic precipitation record was generated for this analysis.

Material properties. The engineering and hydraulic properties of materials were determined from HELP3 default values, as follows (from top to bottom):

Layer	USCS	Thickness (inches)	Porosity	Saturated Hydraulic Conductivity (cm/sec)
Vegetative cover	SM	18	0.473	5.20E-04
60 mil LLDPE	--		--	2.00E-13
Foundation layer	SM	24	0.473	5.20E-04
Refuse	--	Variable	0.671	1.00E-03
Operations layer	SM	24	0.473	5.20E-04
LCRS layer	GP	24	0.397	3.00E-02
60 mil HDPE	--		--	2.00E-13
Low permeability layer	CH	24	0.4	7.80E-07

In calculating the potential percolation through the first (upper) liner HDPE and the final cover LLDPE geomembranes, densities of two pinholes per acre and one installation defect per acre were assumed. The hydraulic conductivities and other engineering properties of materials utilized in the analysis are shown in the HELP3 output sheets presented in Attachment 6.

Model configuration. Modeling of the leachate generation for the Gregory Canyon Landfill was performed by subdividing the 186-acre landfill (the approximate area of the landfill excluding the three transmission line pads on the east side of the landfill) into three zones. The first zone encompasses the two portions of the "floor" area that have a slope of 3% (24.6 acres); the second encompasses the intervening portion of the "floor" area that has a slope of 8.5% (16.0 acres); and the third zone encompasses the "slope" areas (145.8 acres).

Leachate drains in the LCRS system were positioned at 500-foot intervals within the bottom LCRS gravel. Along the side slopes, drains were assumed to be positioned at each construction bench (i.e., 100-foot horizontal spacing).

Closure of the proposed Gregory Canyon Landfill was modeled using a prescriptive final cover (CCR Title 27) including a 24-inch foundation layer, a 60-mil linear LLDPE geomembrane, and an upper 24-inch topsoil layer able to support vegetation.

Modeling period. Using the climatic and material values described above, the HELP 3 analysis was performed iteratively for a simulated 31-year post-closure period. Following the practice described by Peyton and Schroeder (1988), the first year (year 30) is used to initialize the model and its results are not reported as part of the simulation.

Results. Based on the HELP3 model data, the total leachate generation and peak daily leachate generation during the 30-year operating life of the landfill is generally low, except for significant "spikes" associated with the heavy precipitation in years 3, 16 and 22 (Figure 3-12). After final cover is placed at the end of year 30, leachate generation becomes very low. During the landfill's operating life, the amount of leachate generated reaches a maximum value in the 16th year, when the projected total leachate generated is estimated at 53,984 ft^3 (403,800 gallons), of which 8,187 ft^3 (61,239 gallons) are generated from the floor area and 45,797 ft^3 (342,561 gallons) are generated from the slope area. The peak daily leachate generation is estimated to be 142 ft^3 (1,062 gallons) for the floor area and 1,094 ft^3 (8,183 gallons) for the slope areas during the 16th year. The peak daily head on the liner reaches 0.25 inches during the 16th year.

For the 30-year post-closure period, the amount of leachate generated peaks 29 year after closure, when the projected total leachate generation is estimated to be 3,381 ft^3 (25,290 gallons) of which 735 ft^3 (5,498 gallons) are generated in floor areas and 2,646 ft^3 (19,792 gallons) are generated is slope areas. The peak daily leachate generation is estimated to be 2.5 ft^3 (19 gallons) in floor areas and 9.7 ft^3 (73 gallons) in slope areas 26 year after closure.

During the post-closure period, the calculated peak daily head on the liner reaches a maximum of 0.03 inches. The peak daily head during the 30-year operating life of the landfill (0.25 inches) and during the 30-year post-closure period (0.03 inches) are well within the 12-inch range allowed by regulations (e.g., 40 CFR, Subpart D, Section 258.40).

The results of the three simulations performed are included in Attachment 6. The results from GREG3FL simulation represent the portions of the floor that have an average floor grade of 3%. The results from GREG3ST simulation represent the portions of the floor that have an average floor grade of 8.5%. Finally, results of GREG3BS simulation represent the back slopes with an average grade of 50%.

3.8 CONCLUSIONS AND RECOMMENDATIONS

Based upon the geotechnical analyses completed in support of the proposed GCLF design, it is concluded that the landfill meets or exceeds all federal and state design criteria. The following findings support this conclusion:

Stability Analyses

- Analysis of the dominant directions of discontinuities in the bedrock within Gregory Canyon indicates that it is not feasible for substantial large-scale, block-slip movement or wedge failure to occur in cut slopes excavated to a maximum gradient of 2:1. It is recommended that cut slopes be mapped as the excavation proceeds and this conclusion be reevaluated during the excavation process. Based on the nature of the bedrock within Gregory Canyon, it is possible that localized, small-scale block falls could occur.

- In addition, because the excavated areas of the site will be underlying by cohesive bedrock, circular failure in the cut slopes is unlikely.

- For the borrow/stockpile areas A and B, stability analyses indicated that based on the proposed design, the stockpiles are considered to have adequate stability.

- Static stability analyses were performed for the GCLF refuse prism along cross-section A-A' extending down the center of the canyon. The results of the stability analysis, using the computer program SLOPE/W (Geo-Slope, 1995), indicate that the static factor of safety for this configuration is calculated to be 1.50, and meets CCR 27 standards.

- Dynamic stability analyses were performed to assess the behavior of the refuse prism under seismic loading. Initially, pseudo-static stability analysis was performed, however, because the refuse prism did not meet the required factor of safety of 1.5, a more rigorous seismic-induced permanent displacement analysis was performed. Results of this analysis employed methods developed by Bray and Rathje (1998) and calculated a displacement of less than one inch under the maximum credible earthquake (MCE) site acceleration of 0.40g. This estimated displacement is less than the currently accepted standard of practice for liner systems of 6 to 12 inches (Seed and Bonaparte, 1992).

- Stability analyses were performed for the proposed final cover system for closure of the GCLF. As with the refuse prism, initially pseudo-static stability analysis was performed, however, because the pseudo-static factor of safety was less than 1.5, a more rigorous additional analysis was performed to estimate the seismic induced permanent displacement during the postulated MCE event at the site. Results of this more rigorous analysis employed methods developed by Makdisi and Seed (1978) and Bray and Rathje (1998) and calculated displacement of less than one inch to 5.1 inches under the maximum credible earthquake (MCE) site acceleration of 0.40g. These estimated displacements are less than the currently accepted standard of practice of 6 to 12 inches and would not be expected to inhibit the functional integrity of the cover.

Liquefaction Susceptibility

- GLA evaluated the liquefaction susceptibility of the loose alluvial sediment at the toe of Gregory Canyon. The results of this analysis indicate that under existing conditions, factors of safety ranging from 1.30 to 3.34. As a results the liquefaction susceptibility of these alluvial sediments are low.

Rockfalls and Debris Flows

- An assessment of rockfall trajectories was completed for the GCLF, using the steepest (eastern) slopes at the site. Under bouncing trajectories calculated assuming some dampening of the kinetic energy by impact, it is calculated that the bouncing particle (rock) will stop within a few feet from the limit of refuse with a travel time of about 23 seconds.

- Another scenario including an assumption that the rock fragment will start to roll down the slope, results in rockfall extending as much as 360 feet onto the landfill.

- Construction of a "catching" wall, or diversion structure is recommended to mitigate the risk of rockfall.

- GLA mapped a lobate shaped, poorly sorted colluvium deposit, which might have formed from a debris flow, or may have formed by erosion of an older colluvial fan. As a conservative measure, an assessment of the occurrence of debris flows was conducted. The likelihood of a debris flow encroaching on the landfill is considered low considering current and forecast climatic conditions in the area.

Settlement Analysis

- A settlement analysis was performed for the proposed GCLF for the 30-year post-closure maintenance period. Results of this analysis indicate a maximum of 60 feet of post-closure settlement in the southern half (thickest portion) of the landfill prism.

- Results of the settlement analysis indicate that although the refuse prism will experience significant settlement, the grades generally appear to remain adequate for site drainage.

Leachate Generation

- During the 30-year operating life of the landfill, leachate generation is generally low, with the exception of significant "spikes" associated with heavy rain in years 3, 16 and 22. Leachate generation becomes even lower following closure of the landfill and placement of the final cover at the end of year 30.

- The model results indicate that the largest amount of leachate generation occurs in year 16 when the projected total leachate generated is estimated at 53,984 ft^3 (403,800 gallons), peak daily leachate generation is estimated to be 1236 ft^3 (9,245 gallons), and the peak daily head on the liner reaches 0.25 inches.

- Following landfill closure, the amount of leachate generated peaks in the 29th year after closure, when the projected total leachate generation is estimated at 3,381 ft^3 (25,290 gallons). Peak daily leachate generation is estimated to be 12.2 ft^3 (92 gallons), 26 years after closure and the peak daily head on the liner over the post-closure period is calculated to be 0.03 inches.

3.9 ADDITIONAL GEOTECHNICAL REFERENCES

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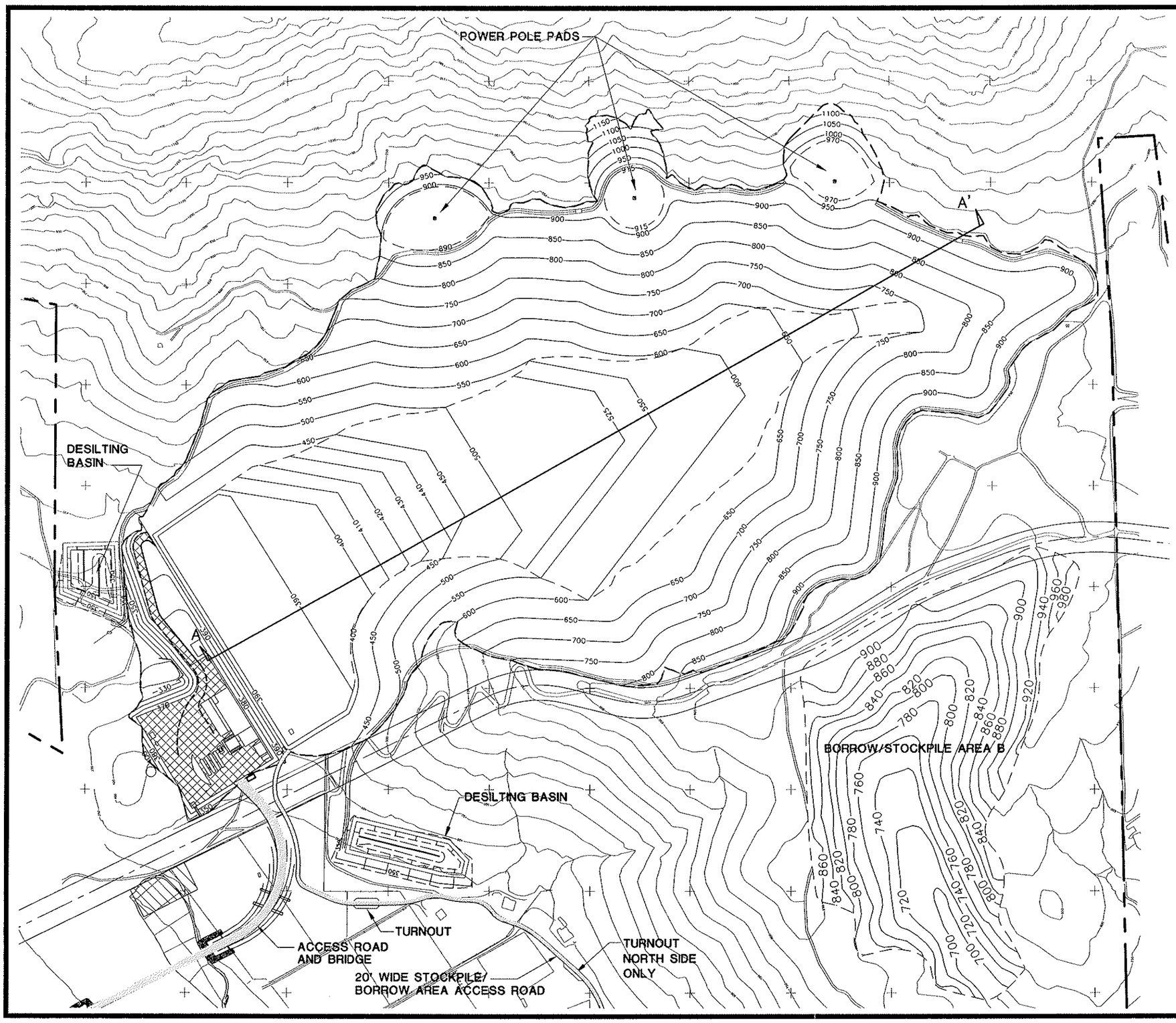
SECTION 3.0

FIGURES



LEGEND

- PROPERTY LINE
- TOP/TOE OF SLOPE
- PROPOSED GROUND CONTOUR
- EXISTING GROUND CONTOUR
- ACCESS/HAUL ROAD
- A — A' SLOPE STABILITY CROSS-SECTION LOCATION

N

GRAPHIC SCALE
250 0 125 250 500
(in feet)
1 inch = 500 ft.

FIGURE 3-1

MASTER EXCAVATION PLAN

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

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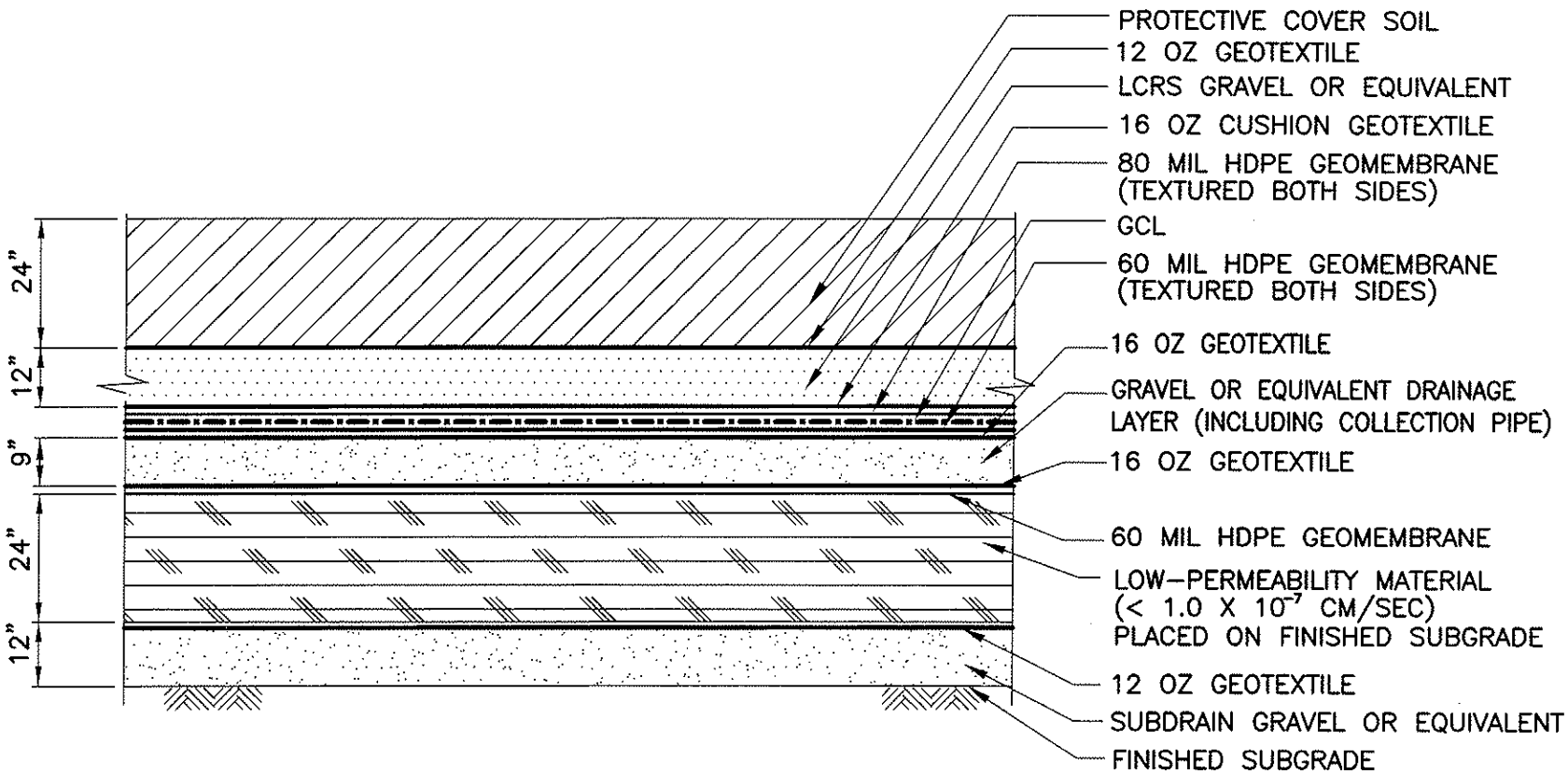

FIGURE 3-2

PROPOSED COMPOSITE LINER SYSTEM DETAIL

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES GREGORY CANYON LANDFILL SAN DIEGO COUNTY, CALIFORNIA

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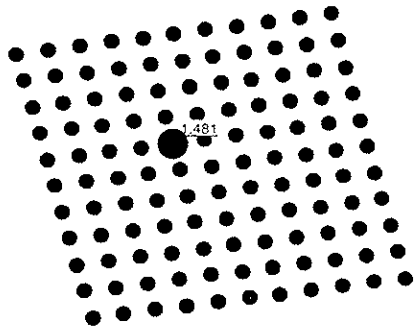
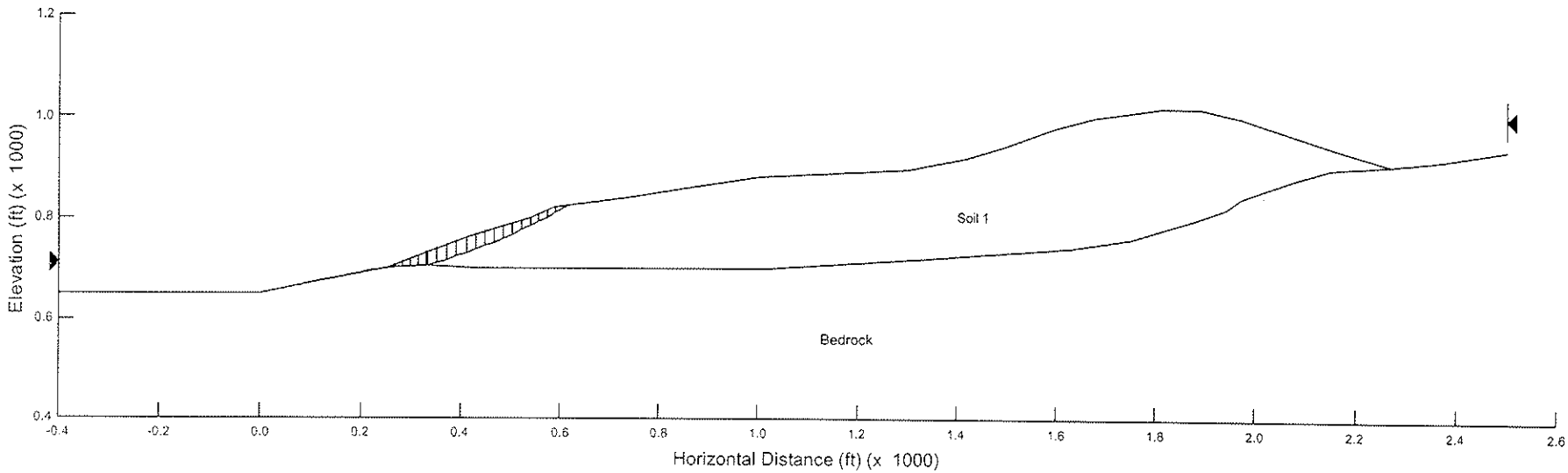


Soil 1
Stockpile
Soil Model Mohr-Coulomb
Unit Weight 120
Cohesion 250
Phi 32
Unsaturated Phi B 0
Piezometric Line # 0
Pore-Air Pressure 0



NOTE: SEE FIGURE 2-7 FOR SECTION LOCATION

FIGURE 3-3A

STOCKPILE SLOPE STABILITY
SECTION 1-1' STATIC ANALYSIS

GEOLOGY, HYDROGEOLOGY AND
GEOTECHNICAL ANALYSES
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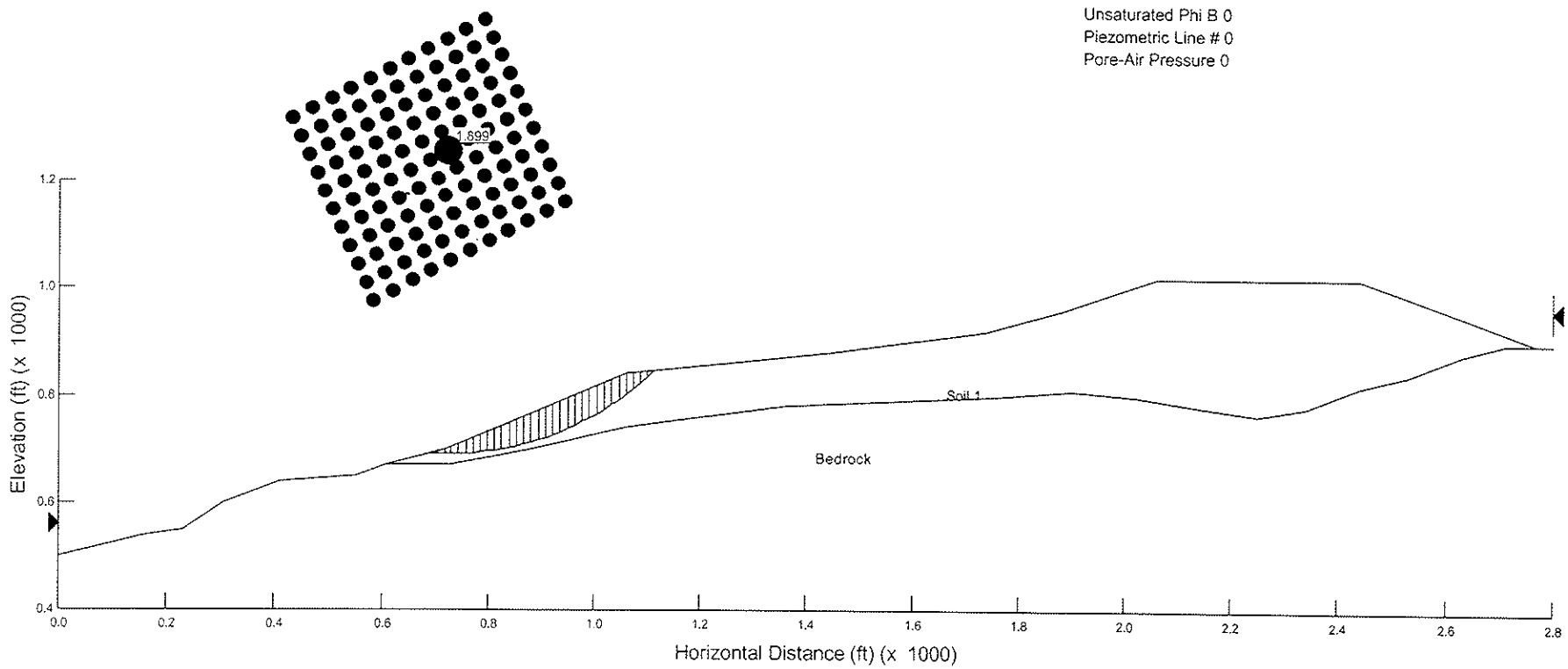

NOTE: SEE FIGURE 2-7 FOR SECTION LOCATION

FIGURE 3-3B

STOCKPILE SLOPE STABILITY
SECTION 2-2' STATIC ANALYSIS

GEOLOGY, HYDROGEOLOGY AND
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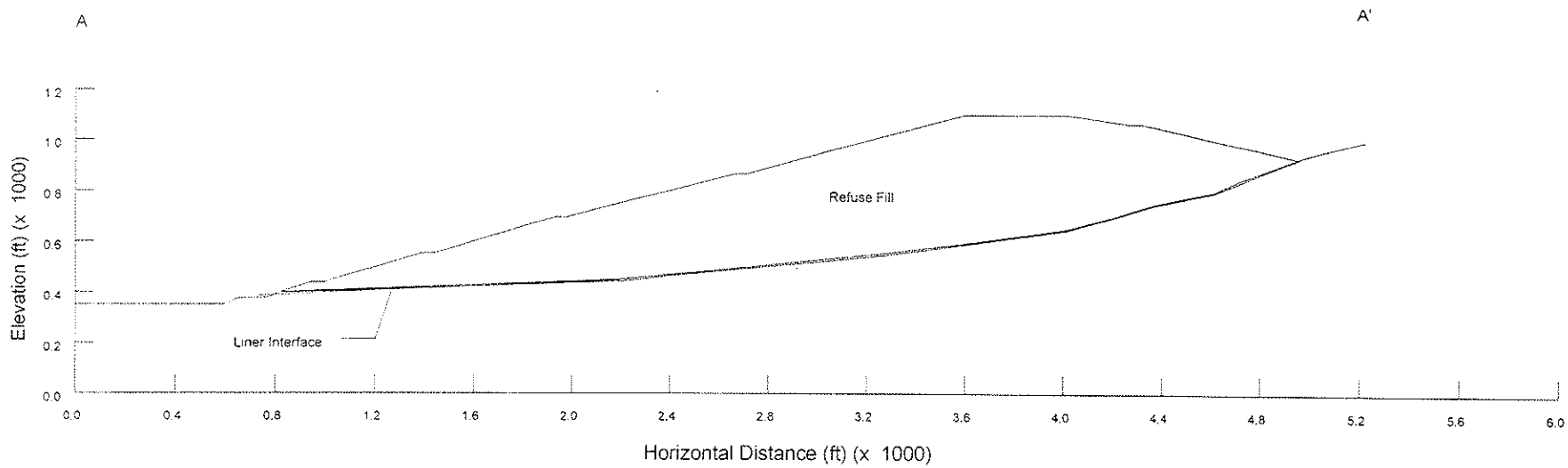

FIGURE 3-4

CROSS-SECTION A-A' FOR SLOPE STABILITY ANALYSIS

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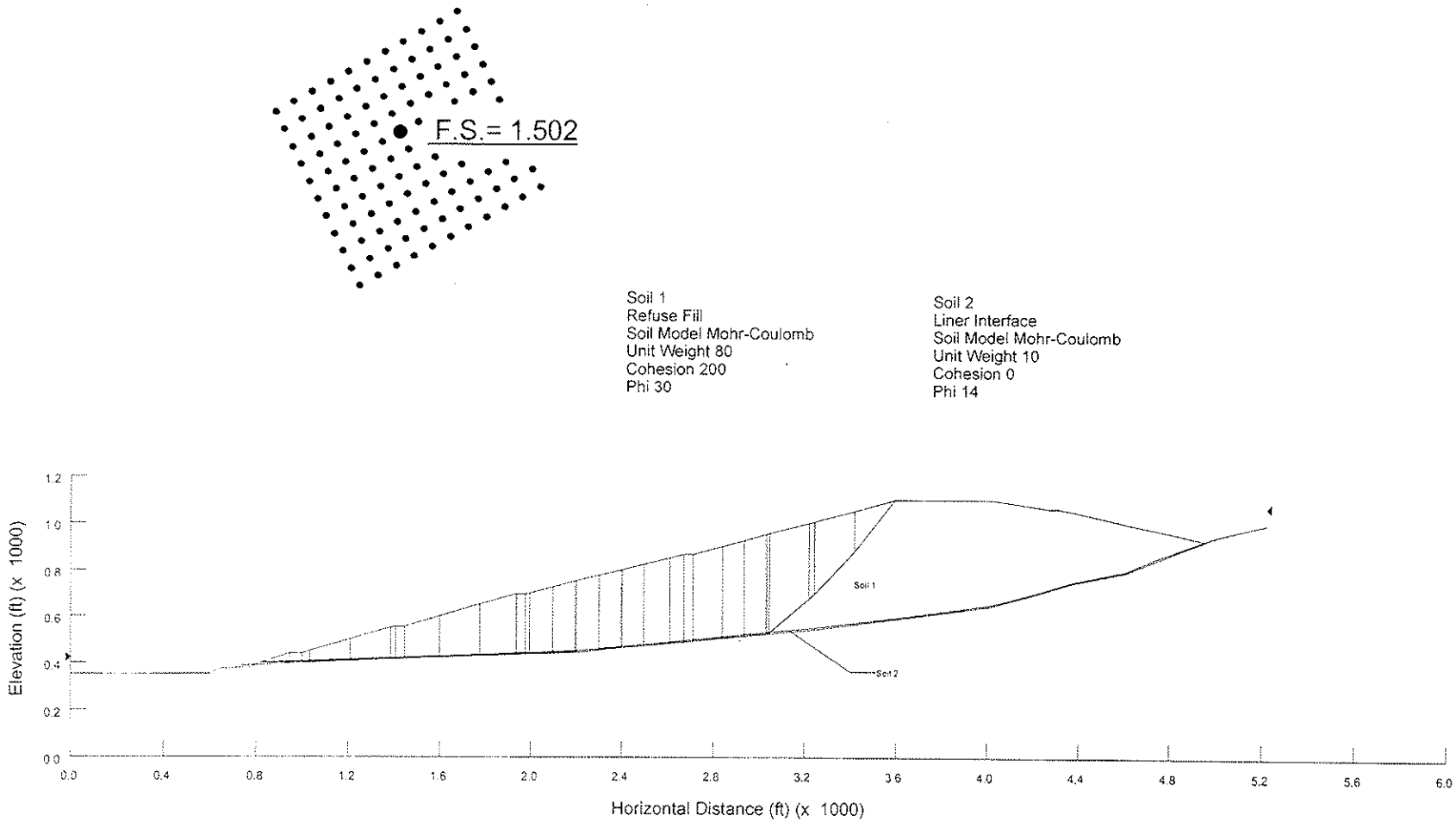

FIGURE 3-5

STATIC ANALYSIS

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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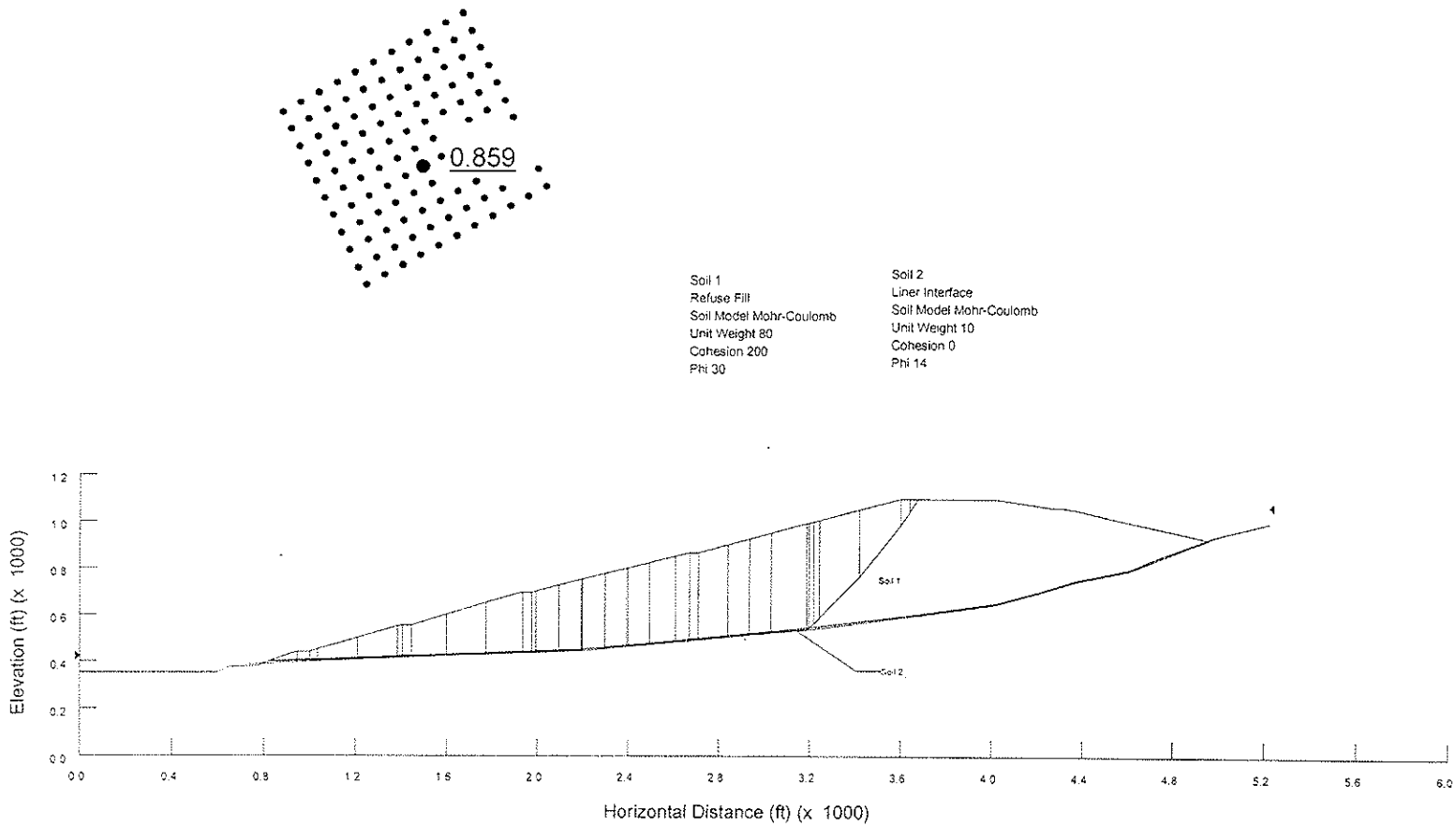

FIGURE 3-6

PSEUDO-STATIC ANALYSIS (USING k=0.15)

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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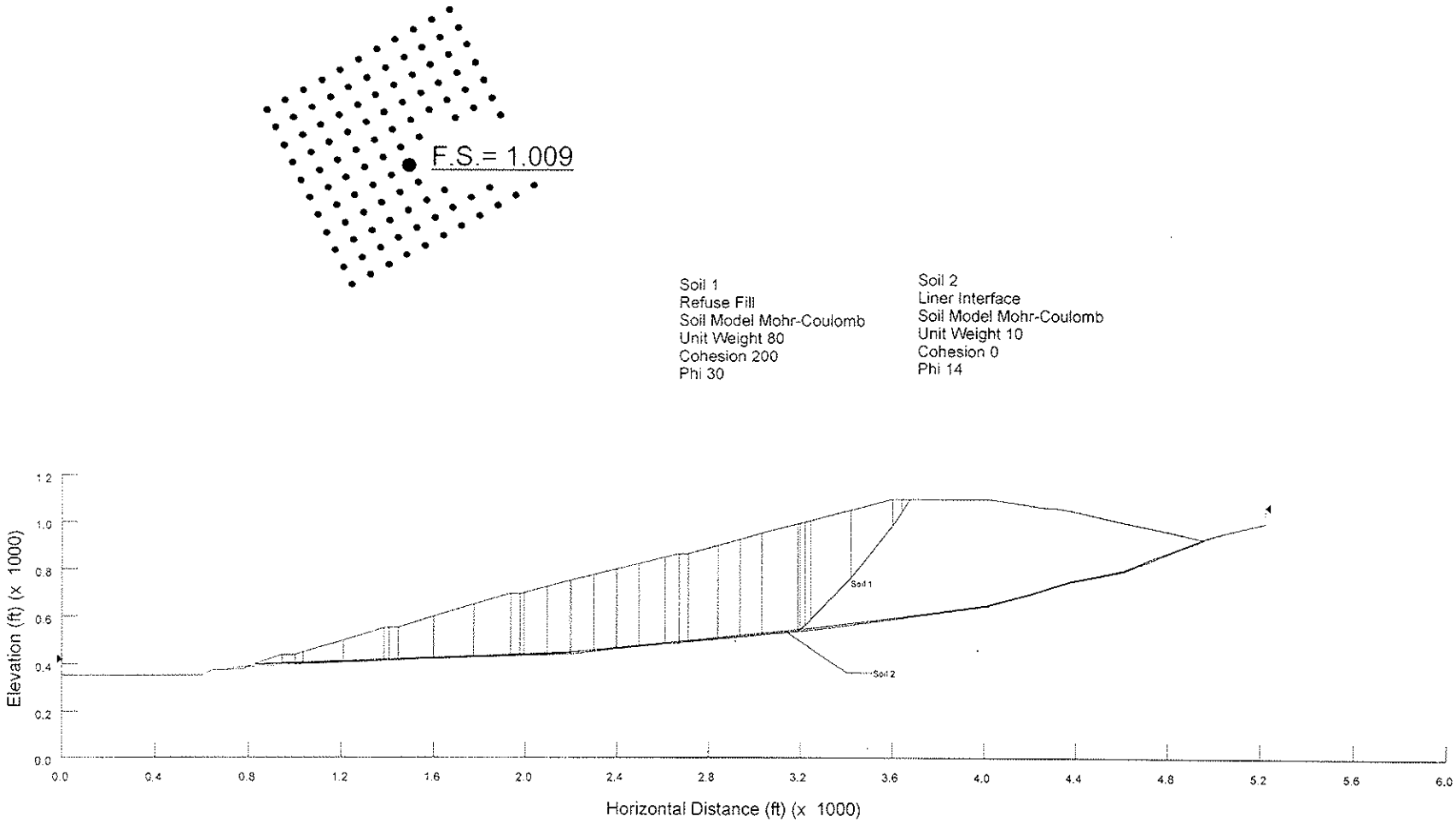

YIELD ACCELERATION, ky = 0.10 g

FIGURE 3-7

PSEUDO-STATIC ANALYSIS FOR YIELD ACCELLERATION

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
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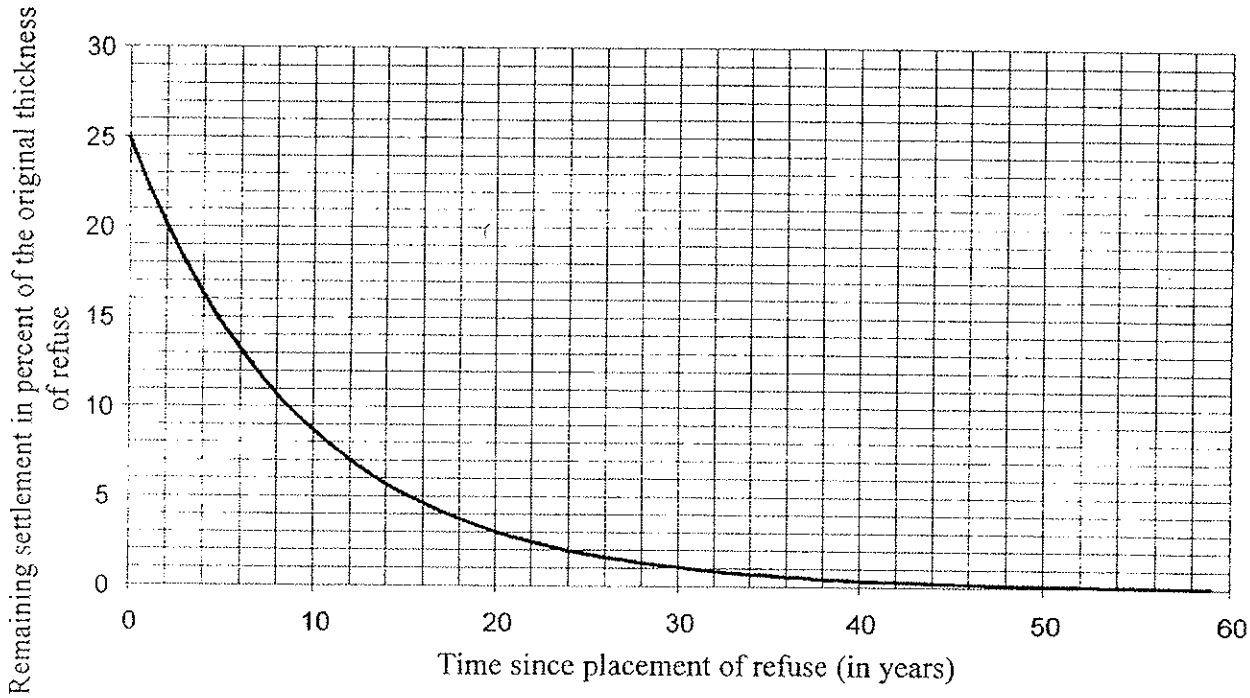

Remaining settlement = $0.25Te^{-0.105t}$

where total expected settlement is 25% of the original thickness, T, of a particular lift of refuse. This equation assumes that settlement decays exponentially with time at a rate of 0.105t, where t is the time in years since the particular lift of refuse was placed.

FIGURE 3-8

SETTLEMENT CURVE

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

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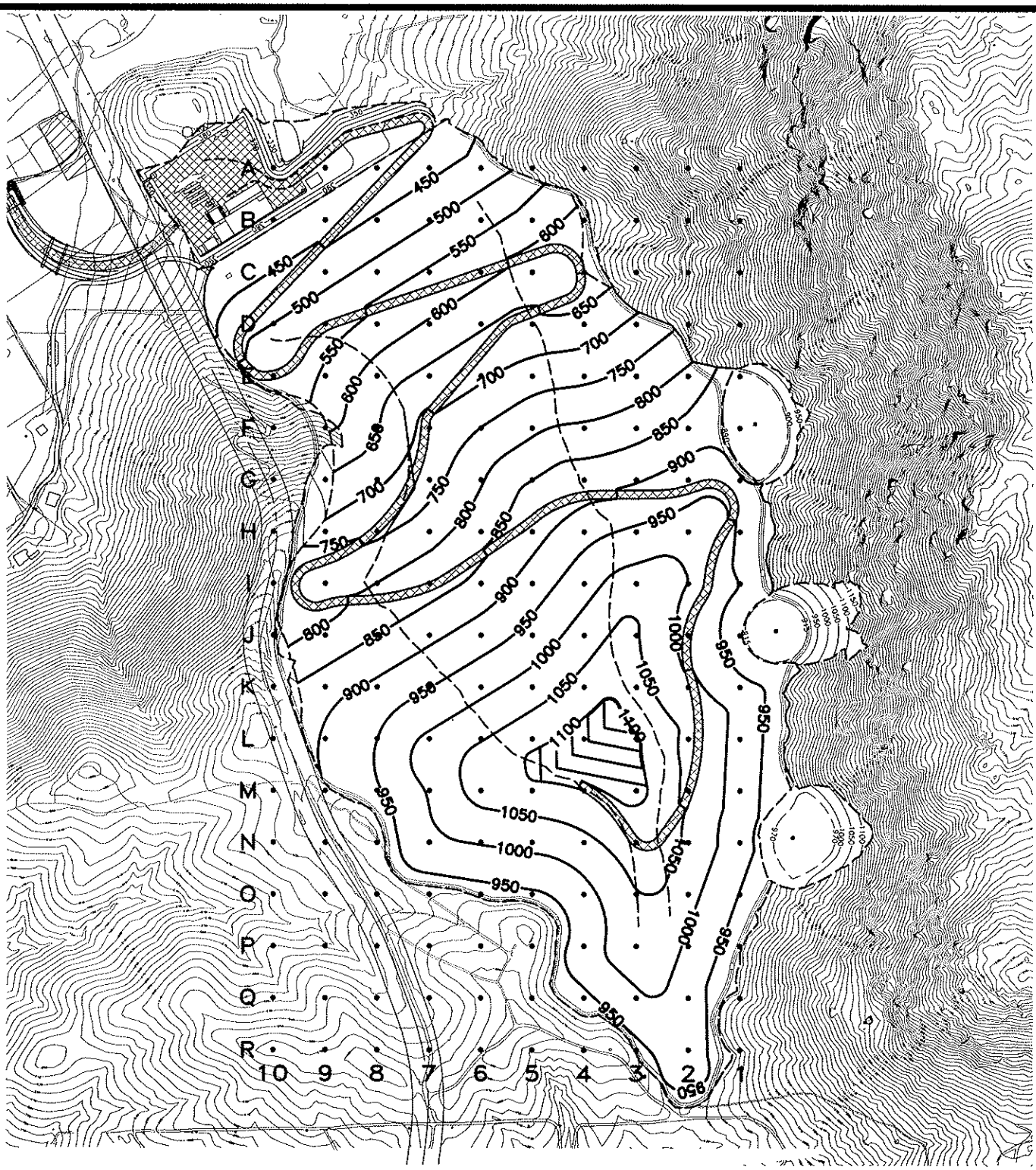

FIGURE 3–9

NODES USED FOR SETTLEMENT ANALYSIS

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GRAPHIC SCALE
350 0 175 350 700
(in feet)
1 inch = 700 ft.

N

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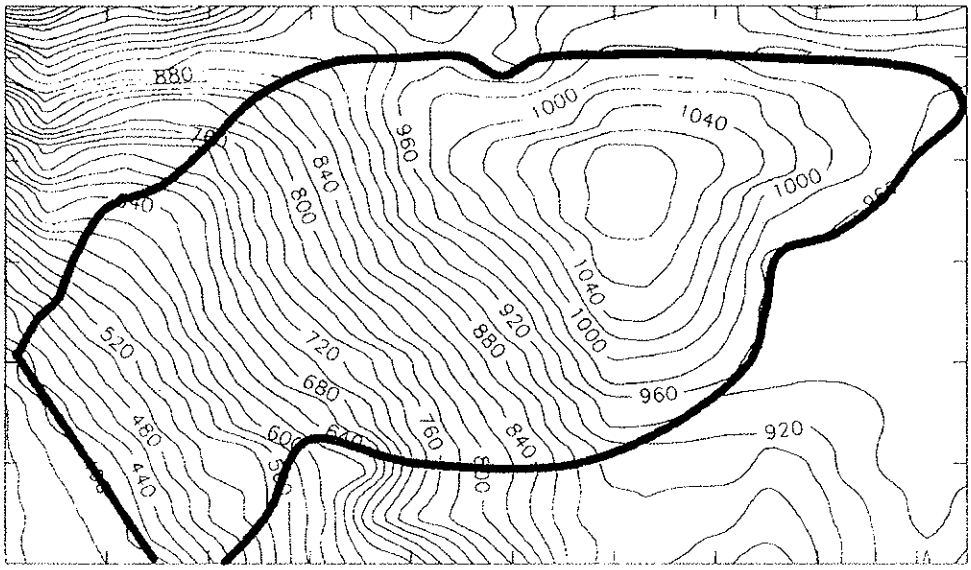
VL	NOVEMBER 2003	9539



Year 30 - Final closure

2,000 feet

FIGURE 3-10

FINAL CONFIGURATION OF THE LANDFILL AT CLOSURE

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539

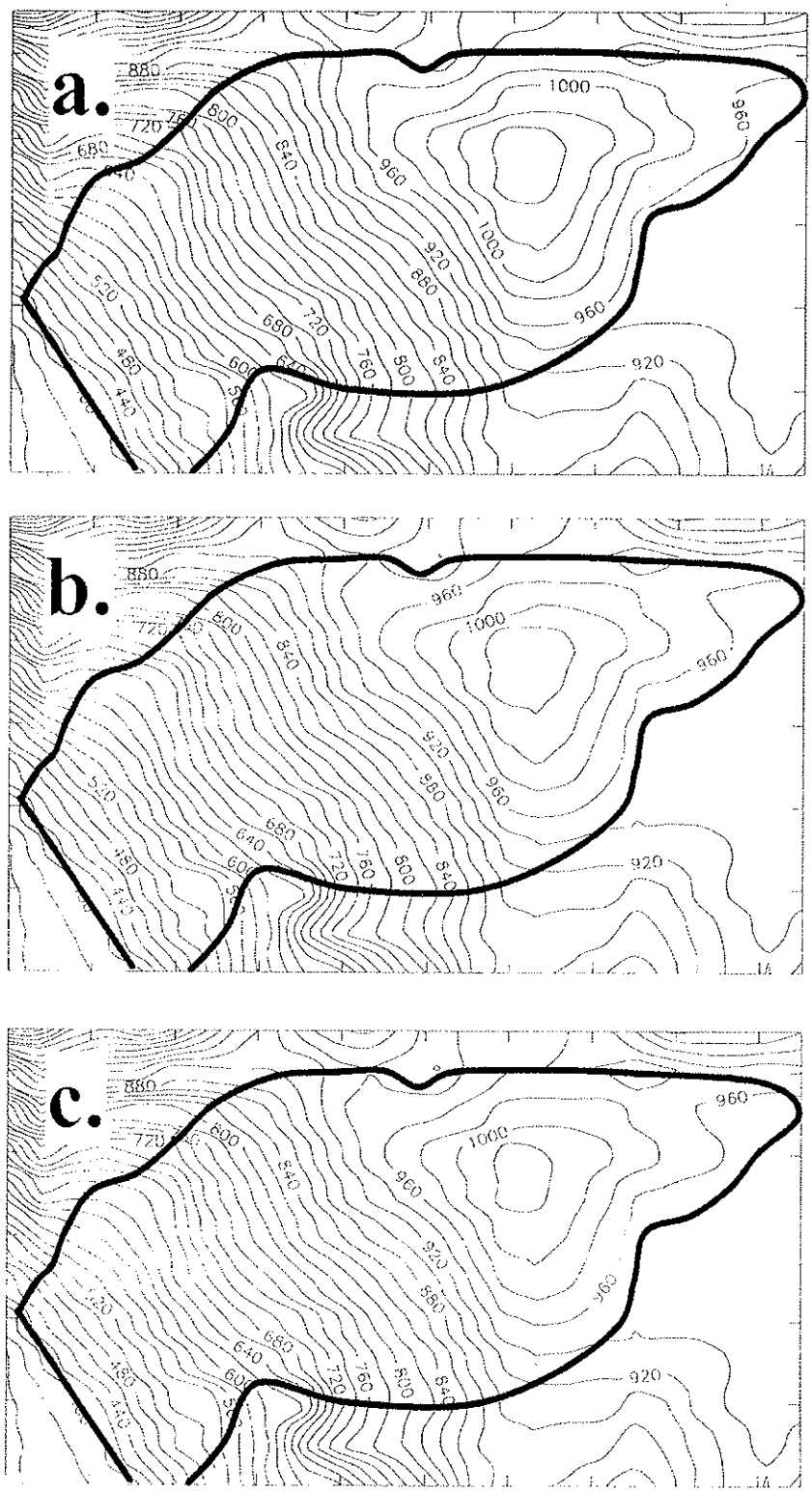


FIGURE 3-11

ESTIMATED CONFIGURATION OF THE LANDFILL DURING THE 30 YEARS FOLLOWING CLOSURE

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539

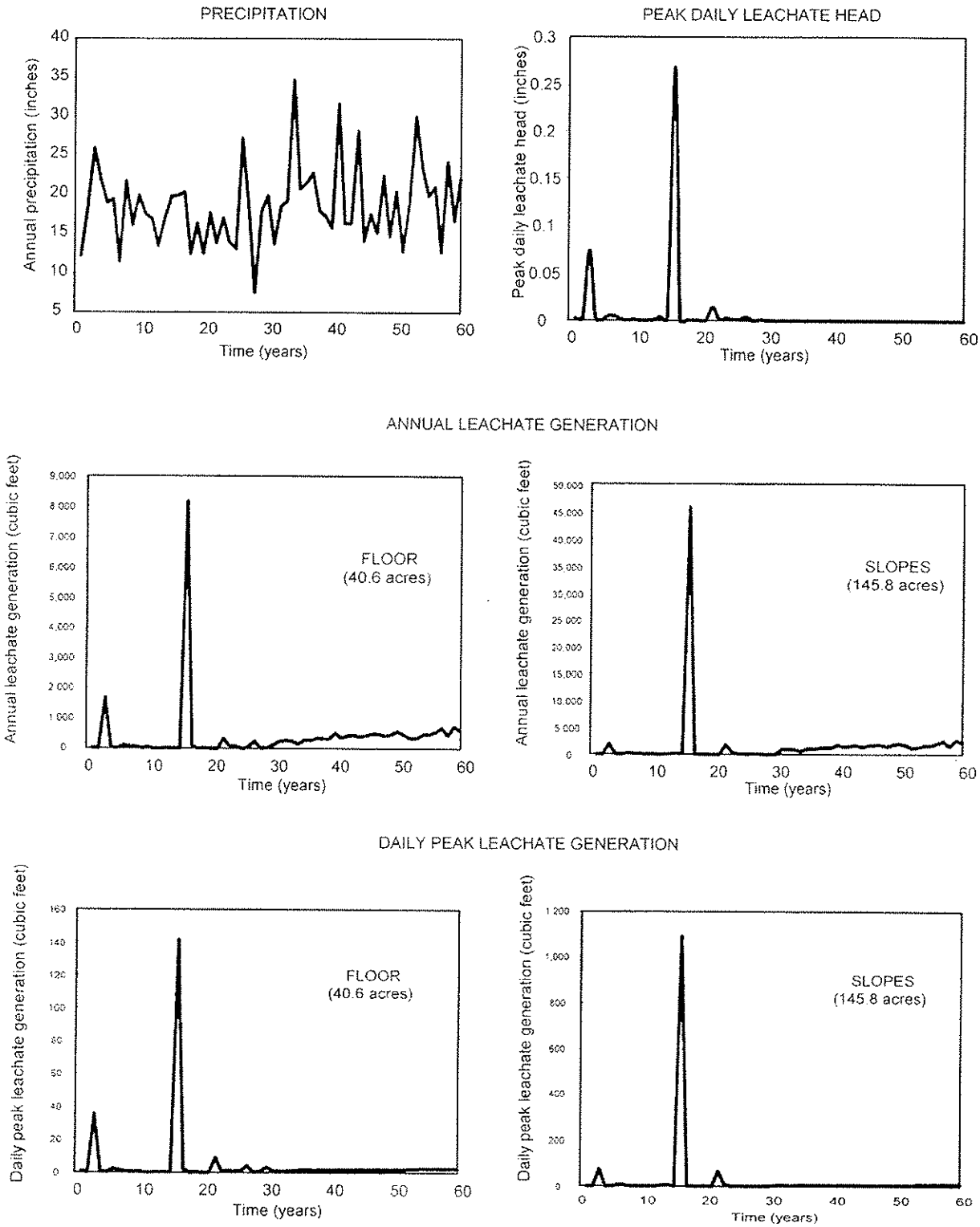


FIGURE 3–12

RESULTS OF LEACHATE GENERATION ANALYSIS

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MAY 2003	9539

SECTION 3.0

TABLES

Table 3-1
Model Accumulation of Refuse (in feet) Over Time

Year 1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X
4	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X
5	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X
6	0	20	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X
7	30	30	15	10	0	0	0	0	0	0	0	0	0	0	X	X	X	X
8	X	30	20	14	0	0	0	0	0	0	0	0	X	X	X	X	X	X
9	X	10	25	18	0	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	28	22	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X
4	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X
5	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X
6	0	40	40	35	20	2	0	0	0	0	0	0	0	0	X	X	X	X
7	30	40	40	40	32	0	0	0	0	0	0	0	0	0	X	X	X	X
8	X	40	40	40	30	0	0	0	0	0	0	0	X	X	X	X	X	X
9	X	0	40	40	0	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	40	40	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 5

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X
4	X	X	0	30	0	0	0	0	0	0	0	0	0	0	0	0	X	X
5	X	95	125	150	125	25	0	0	0	0	0	0	0	0	X	X	X	X
6	30	90	130	150	150	95	0	0	0	0	0	0	0	0	X	X	X	X
7	0	45	100	150	130	97	0	0	0	0	0	0	0	0	X	X	X	X
8	X	10	65	105	45	0	0	0	0	0	0	0	X	X	X	X	X	X
9	X	0	30	75	10	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	0	50	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 10

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X
4	X	X	0	0	0	0	10	10	5	2	0	0	0	0	0	0	X	X
5	X	0	0	0	0	50	25	15	15	10	0	0	0	0	X	X	X	X
6	0	0	0	0	0	5	55	20	20	5	0	0	0	0	X	X	X	X
7	0	0	0	0	0	5	80	35	10	0	0	0	0	0	X	X	X	X
8	X	0	0	0	5	0	0	0	0	0	0	0	X	X	X	X	X	X
9	X	0	0	0	0	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 3-1
Model Accumulation of Refuse (in feet) Over Time (cont'd)

Year 14

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	X
4	X	X	0	0	50	50	50	50	50	50	25	0	0	0	0	0	X	X
5	X	0	0	0	20	50	50	50	50	50	45	0	0	0	X	X	X	X
6	0	0	0	0	0	50	50	50	50	50	25	0	0	0	X	X	X	X
7	0	0	0	0	0	0	0	25	50	35	0	0	0	0	X	X	X	X
8	X	0	0	0	0	0	0	0	25	0	0	0	X	X	X	X	X	X
9	X	0	0	0	0	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 17

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	X	X	X	X	0	0	0	35	10	0	20	25	0	0	0	0	0	X
4	X	X	30	50	50	50	50	50	50	50	50	50	0	0	0	0	X	X
5	X	0	15	50	50	50	50	50	50	50	50	50	0	0	X	X	X	X
6	0	0	0	45	50	30	0	25	50	50	50	40	0	0	X	X	X	X
7	0	0	0	0	0	0	0	0	50	50	50	0	0	0	X	X	X	X
8	X	0	0	0	0	0	0	0	50	20	0	0	X	X	X	X	X	X
9	X	0	0	0	0	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 20

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	X	X
2	X	X	X	X	0	0	0	10	0	0	5	50	10	0	0	0	0	0
3	X	X	X	X	75	70	100	100	100	95	100	100	100	60	5	0	0	X
4	X	X	0	10	90	100	100	100	100	100	100	100	100	0	0	0	X	X
5	X	0	0	5	75	100	100	100	100	100	100	100	75	0	X	X	X	X
6	0	0	0	0	40	120	150	125	100	100	100	100	55	0	X	X	X	X
7	0	0	0	0	75	165	195	175	100	100	100	45	0	0	X	X	X	X
8	X	0	0	0	120	150	135	175	100	100	75	0	X	X	X	X	X	X
9	X	0	0	0	0	X	X	10	60	25	0	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 24

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	25	25	0	0	0	0	X	X
2	X	X	X	X	15	50	95	100	100	75	100	100	100	90	90	30	0	0
3	X	X	X	X	10	80	100	100	100	100	100	100	100	100	100	75	0	X
4	X	X	0	0	0	60	100	100	100	100	100	100	100	100	0	0	X	X
5	X	0	0	0	0	40	100	100	100	100	100	100	100	50	X	X	X	X
6	0	0	0	0	0	0	45	80	100	100	100	100	100	40	X	X	X	X
7	0	0	0	0	0	0	0	25	80	100	100	100	60	5	X	X	X	X
8	X	0	0	0	0	0	0	0	50	100	100	85	X	X	X	X	X	X
9	X	0	0	0	0	X	X	0	25	60	55	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 3-1
Model Accumulation of Refuse (in feet) Over Time (cont'd)

Year 28

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	50	98	95	0	100	100	100	65	65	0	X	X
2	X	X	X	X	0	10	75	100	100	100	100	100	100	100	100	100	85	70
3	X	X	X	X	0	0	45	100	100	100	100	100	100	100	100	100	90	X
4	X	X	0	0	0	0	25	85	100	100	100	100	100	100	100	65	X	X
5	X	0	0	0	0	0	0	35	75	100	100	100	100	100	X	X	X	X
6	0	0	0	0	0	0	0	0	15	80	100	100	100	100	X	X	X	X
7	0	0	0	0	0	0	0	0	0	40	100	100	100	100	X	X	X	X
8	X	0	0	0	0	0	0	0	0	0	60	100	X	X	X	X	X	X
9	X	0	0	0	0	X	X	0	0	0	20	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Year 30

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	X	X	X	X	X	0	0	0	0	0	20	35	30	20	0	0	X	X
2	X	X	X	X	0	0	0	25	50	35	55	90	95	95	70	45	25	10
3	X	X	X	X	0	0	0	5	70	105	125	150	150	120	95	70	40	X
4	X	X	0	0	0	0	0	0	30	75	120	150	150	90	30	20	X	X
5	X	0	0	0	0	0	0	0	0	20	75	130	130	60	X	X	X	X
6	0	0	0	0	0	0	0	0	0	0	40	100	110	50	X	X	X	X
7	0	0	0	0	0	0	0	0	0	0	0	55	50	30	X	X	X	X
8	X	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X
9	X	0	0	0	0	X	X	0	0	0	0	X	X	X	X	X	X	X
10	X	X	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Note: The values represent thickness of accumulated refuse (in feet) at the nodes of a 2-dimensional grid with cells that are 250 feet by 250 feet. Cell A-10 coincides with the center of the proposed site facilities area.

Table 3-2
Elevation Values Used to Calculate the Maps (Figures 3-10 and 3-11)

X - coordinate	Y - coordinate	Northing	Easting	Elevation in year 31	Elevation in year 40	Elevation in year 50	Elevation in year 60
0	A	250	2750	1150	1150	1150	1150
1	A	250	2500	1000	1000	1000	1000
2	A	250	2250	900	900	900	900
3	A	250	2000	750	750	750	750
4	A	250	1750	655	655	655	655
5	A	250	1500	550	550	550	550
6	A	250	1250	480	479.7	479.6	479.5
7	A	250	1000	440	439.6	439.4	439.3
8	A	250	750	400	400	400	400
9	A	250	500	378	378	378	378
10	A	250	250	370	370	370	370
11	A	250	0	370	370	370	370
0	B	500	2750	1070	1070	1070	1070
1	B	500	2500	910	910	910	910
2	B	500	2250	795	795	795	795
3	B	500	2000	655	655	655	655
4	B	500	1750	615	615	615	615
5	B	500	1500	575	574.0	573.7	573.5
6	B	500	1250	540	538.7	538.1	537.9
7	B	500	1000	495	494.1	493.7	493.5
8	B	500	750	460	459.4	459.2	459.1
9	B	500	500	390	389.9	389.9	389.9
10	B	500	250	380	380	380	380
11	B	500	0	370	370	370	370
0	C	750	2750	1080	1080	1080	1080
1	C	750	2500	925	925	925	925
2	C	750	2250	790	790	790	790
3	C	750	2000	700	700	700	700
4	C	750	1750	630	628.9	628.5	628.4
5	C	750	1500	615	613.2	612.5	612.2
6	C	750	1250	580	578.4	577.7	577.5
7	C	750	1000	550	548.6	548.0	547.8
8	C	750	750	515	513.9	513.5	513.3
9	C	750	500	480	479.2	478.9	478.8
10	C	750	250	450	449.5	449.3	449.3
11	C	750	0	390	390	390	390
0	D	1000	2750	1040	1040	1040	1040
1	D	1000	2500	890	890	890	890
2	D	1000	2250	795	795	795	795
3	D	1000	2000	705	705	705	705
4	D	1000	1750	660	657.5	656.4	656.0
5	D	1000	1500	655	651.5	650.0	649.5
6	D	1000	1250	645	641.7	640.3	639.8
7	D	1000	1000	600	598.1	597.4	597.1
8	D	1000	750	555	553.6	553.0	552.8
9	D	1000	500	525	523.8	523.4	523.2
10	D	1000	250	500	499.1	498.7	498.5
11	D	1000	0	450	450	450	450

Table 3-2 (cont'd)
Elevation Values Used to Calculate the Maps (Figures 3-10 and 3-11)

X - coordinate	Y - coordinate	Northing	Easting	Elevation in year 31	Elevation in year 40	Elevation in year 50	Elevation in year 60
0	E	1250	2750	995	995	995	995
1	E	1250	2500	895	895	895	895
2	E	1250	2250	810	808.9	808.4	808.3
3	E	1250	2000	760	755.6	753.8	753.2
4	E	1250	1750	740	732.6	729.5	728.5
5	E	1250	1500	725	717.9	714.9	713.8
6	E	1250	1250	690	684.7	682.4	681.7
7	E	1250	1000	655	649.8	647.7	647.0
8	E	1250	750	620	613.5	610.7	609.8
9	E	1250	500	500	499.9	499.9	499.8
10	E	1250	250	525	525	525	525
11	E	1250	0	500	500	500	500
0	F	1500	2750	900	900	900	900
1	F	1500	2500	900	900	900	900
2	F	1500	2250	860	855.2	853.2	852.5
3	F	1500	2000	830	820.8	816.9	815.6
4	F	1500	1750	810	797.7	792.6	790.9
5	F	1500	1500	790	778.1	773.2	771.4
6	F	1500	1250	750	740.8	737.0	735.7
7	F	1500	1000	705	696.0	692.2	690.9
8	F	1500	750	650	642.8	639.8	638.7
9	F	1500	500	600	600	600	600
10	F	1500	250	580	580	580	580
11	F	1500	0	590	590	590	590
0	G	1750	2750	955	955	955	955
1	G	1750	2500	905	899.4	897.1	896.3
2	G	1750	2250	925	909.7	903.3	901.1
3	G	1750	2000	895	877.8	870.7	868.2
4	G	1750	1750	875	856.8	849.3	846.7
5	G	1750	1500	850	834.4	827.9	825.6
6	G	1750	1250	795	782.2	777.0	775.1
7	G	1750	1000	735	724.2	719.8	718.2
8	G	1750	750	695	688.5	685.8	684.8
9	G	1750	500	600	600	600	600
10	G	1750	250	700	700	700	700
11	G	1750	0	640	640	640	640
0	H	2000	2750	980	980	980	980
1	H	2000	2500	950	939.1	934.6	933.0
2	H	2000	2250	975	952.6	943.3	940.1
3	H	2000	2000	955	929.8	919.3	915.7
4	H	2000	1750	935	910.2	899.9	896.2
5	H	2000	1500	885	865.6	857.6	854.8
6	H	2000	1250	830	815.6	809.6	807.5
7	H	2000	1000	775	763.5	758.7	757.0
8	H	2000	750	745	736.6	733.1	731.8
9	H	2000	500	710	709.5	709.3	709.2
10	H	2000	250	760	760	760	760
11	H	2000	0	650	650	650	650

Table 3-2 (cont'd)
Elevation Values Used to Calculate the Maps (Figures 3-10 and 3-11)

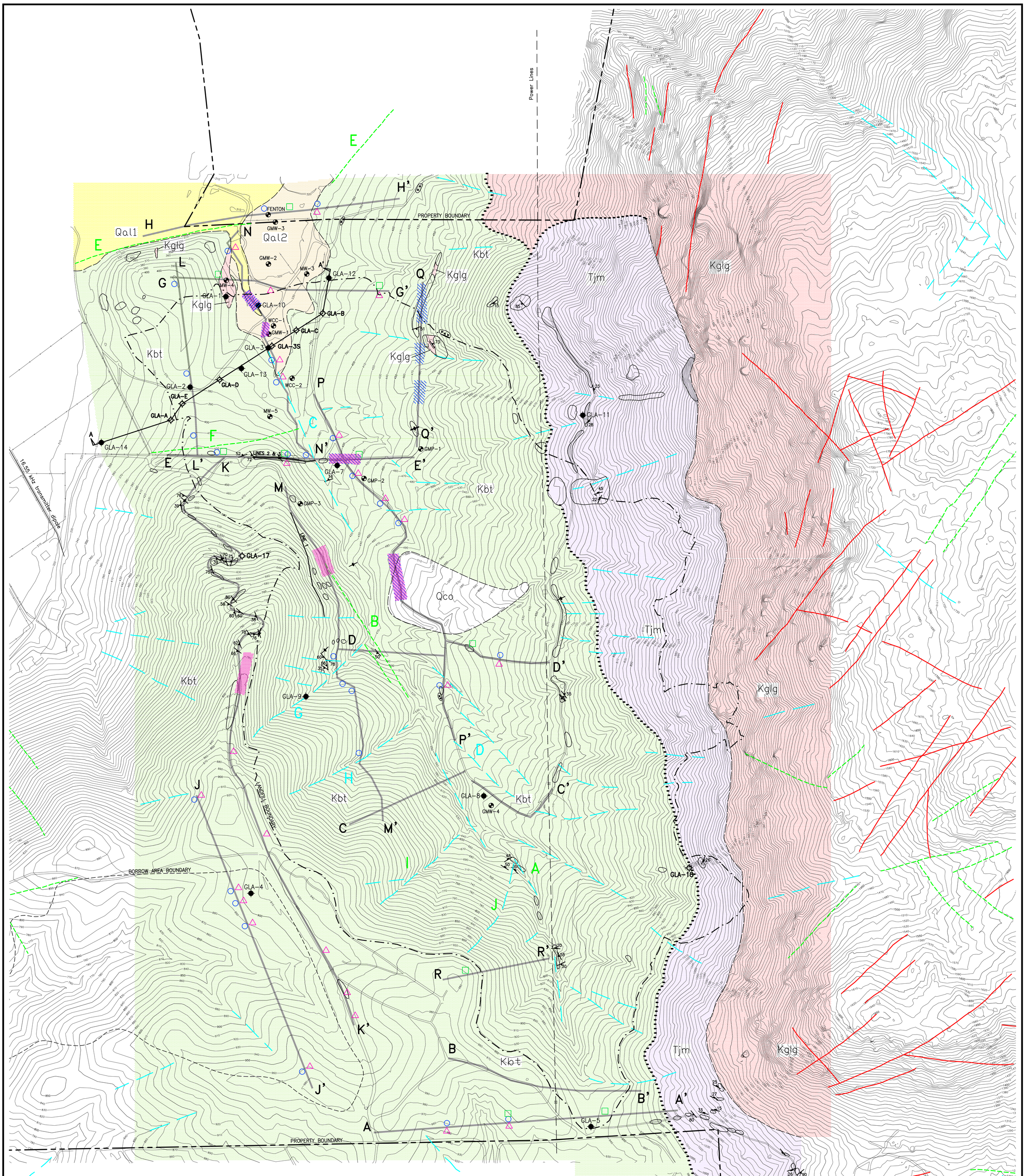
X - coordinate	Y - coordinate	Northing	Easting	Elevation in year 31	Elevation in year 40	Elevation in year 50	Elevation in year 60
0	I	2250	2750	1000	1000	1000	1000
1	I	2250	2500	950	939.4	935.0	933.5
2	I	2250	2250	1000	974.7	964.1	960.5
3	I	2250	2000	1020	986.7	972.9	968.1
4	I	2250	1750	980	949.4	936.8	932.3
5	I	2250	1500	925	901.2	891.3	887.8
6	I	2250	1250	865	847.8	840.7	838.1
7	I	2250	1000	830	816.1	810.3	808.3
8	I	2250	750	800	789.1	784.6	783.0
9	I	2250	500	775	770.3	768.3	767.6
10	I	2250	250	800	800	800	800
11	I	2250	0	700	700	700	700
0	J	2500	2750	915	915	915	915
1	J	2500	2500	900	900	900	900
2	J	2500	2250	985	963.5	954.7	951.5
3	J	2500	2000	1055	1017.5	1002.0	996.5
4	J	2500	1750	1025	988.3	973.1	967.8
5	J	2500	1500	970	940.7	928.6	924.3
6	J	2500	1250	930	905.8	895.8	892.2
7	J	2500	1000	890	870.7	862.7	859.9
8	J	2500	750	850	837.1	831.8	829.9
9	J	2500	500	810	804.4	802.1	801.3
10	J	2500	250	840	840	840	840
11	J	2500	0	775	775	775	775
0	K	2750	2750	950	950	950	950
1	K	2750	2500	970	954.3	947.8	945.5
2	K	2750	2250	1005	978.7	967.8	964.0
3	K	2750	2000	1075	1033.8	1016.8	1010.8
4	K	2750	1750	1070	1027.8	1010.3	1004.2
5	K	2750	1500	1025	988.5	973.3	968.0
6	K	2750	1250	990	958.8	945.9	941.3
7	K	2750	1000	950	924.9	914.6	910.9
8	K	2750	750	910	892.4	885.1	882.5
9	K	2750	500	870	863.7	861.1	860.2
10	K	2750	250	875	875	875	875
11	K	2750	0	860	860	860	860
0	L	3000	2750	950	950	950	950
1	L	3000	2500	985	967.2	959.8	957.3
2	L	3000	2250	1040	1006.7	993.0	988.1
3	L	3000	2000	1100	1055.2	1036.6	1030.1
4	L	3000	1750	1100	1054.3	1035.4	1028.8
5	L	3000	1500	1080	1037.1	1019.3	1013.0
6	L	3000	1250	1050	1011.6	995.6	990.0
7	L	3000	1000	1005	976.8	965.1	961.0
8	L	3000	750	950	932.6	925.4	922.9
9	L	3000	500	905	905	905	905
10	L	3000	250	900	900	900	900
11	L	3000	0	890	890	890	890

Table 3-2 (cont'd)
Elevation Values Used to Calculate the Maps (Figures 3-10 and 3-11)

X - coordinate	Y - coordinate	Northing	Easting	Elevation in year 31	Elevation in year 40	Elevation in year 50	Elevation in year 60
0	M	3250	2750	950	950	950	950
1	M	3250	2500	980	964.7	958.4	956.2
2	M	3250	2250	1045	1013.0	999.7	995.1
3	M	3250	2000	1100	1056.1	1037.9	1031.5
4	M	3250	1750	1100	1056.1	1037.9	1031.5
5	M	3250	1500	1080	1040.0	1023.5	1017.7
6	M	3250	1250	1060	1023.8	1008.7	1003.5
7	M	3250	1000	1000	977.6	968.3	965.0
8	M	3250	750	950	950	950	950
9	M	3250	500	900	900	900	900
10	M	3250	250	900	900	900	900
11	M	3250	0	880	880	880	880
0	N	3500	2750	970	970	970	970
1	N	3500	2500	970	960.0	955.9	954.4
2	N	3500	2250	1045	1014.2	1001.4	997.0
3	N	3500	2000	1070	1032.1	1016.5	1010.9
4	N	3500	1750	1040	1009.2	996.4	991.9
5	N	3500	1500	1010	986.9	977.4	974.0
6	N	3500	1250	1000	979.1	970.4	967.3
7	N	3500	1000	980	964.4	957.9	955.6
8	N	3500	750	920	920	920	920
9	N	3500	500	915	915	915	915
10	N	3500	250	895	895	895	895
11	N	3500	0	860	860	860	860
0	O	3750	2750	1000	1000	1000	1000
1	O	3750	2500	950	942.8	939.8	938.7
2	O	3750	2250	1020	992.6	981.3	977.3
3	O	3750	2000	1045	1013.2	1000.1	995.4
4	O	3750	1750	980	964.7	958.4	956.2
5	O	3750	1500	950	950	950	950
6	O	3750	1250	950	950	950	950
7	O	3750	1000	940	940	940	940
8	O	3750	750	940	940	940	940
9	O	3750	500	890	890	890	890
10	O	3750	250	860	860	860	860
11	O	3750	0	840	840	840	840
0	P	4000	2750	1050	1050	1050	1050
1	P	4000	2500	950	950	950	950
2	P	4000	2250	995	975.5	967.4	964.5
3	P	4000	2000	1020	993.7	982.9	979.0
4	P	4000	1750	970	960.0	955.9	954.4
5	P	4000	1500	950	950	950	950
6	P	4000	1250	950	950	950	950
7	P	4000	1000	950	950	950	950
8	P	4000	750	920	920	920	920
9	P	4000	500	895	895	895	895
10	P	4000	250	885	885	885	885
11	P	4000	0	870	870	870	870

Table 3-2 (cont'd)
Elevation Values Used to Calculate the Maps (Figures 3-10 and 3-11)

X - coordinate	Y - coordinate	Northing	Easting	Elevation in year 31	Elevation in year 40	Elevation in year 50	Elevation in year 60
0	Q	4250	2750	1070	1070	1070	1070
1	Q	4250	2500	960	960	960	960
2	Q	4250	2250	975	962.1	956.7	954.9
3	Q	4250	2000	990	974.5	968.0	965.8
4	Q	4250	1750	950	950	950	950
5	Q	4250	1500	950	950	950	950
6	Q	4250	1250	950	950	950	950
7	Q	4250	1000	945	945	945	945
8	Q	4250	750	930	930	930	930
9	Q	4250	500	950	950	950	950
10	Q	4250	250	915	915	915	915
11	Q	4250	0	920	920	920	920
0	R	4500	2750	1050	1050	1050	1050
1	R	4500	2500	960	960	960	960
2	R	4500	2250	960	950.8	947.0	945.7
3	R	4500	2000	950	950	950	950
4	R	4500	1750	950	950	950	950
5	R	4500	1500	960	960	960	960
6	R	4500	1250	960	960	960	960
7	R	4500	1000	950	950	950	950
8	R	4500	750	955	955	955	955
9	R	4500	500	955	955	955	955
10	R	4500	250	955	955	955	955
11	R	4500	0	945	945	945	945
0	S	4750	2750	1020	1020	1020	1020
1	S	4750	2500	975	975	975	975
2	S	4750	2250	945	945	945	945
3	S	4750	2000	950	950	950	950
4	S	4750	1750	945	945	945	945
5	S	4750	1500	950	950	950	950
6	S	4750	1250	952	952	952	952
7	S	4750	1000	952	952	952	952
8	S	4750	750	952	952	952	952
9	S	4750	500	945	945	945	945
10	S	4750	250	930	930	930	930
11	S	4750	0	910	910	910	910



LEGEND:

Qal1	Recent alluvium associated with the San Luis Rey river floodplain. Unconsolidated deposits of sand, silt and gravel with variable amounts of cobbles and boulders.
Qal2	Older alluvium. Remanents of alluvial sediments deposited at the mouth of Gregory Canyon. Weakly stratified silt and sand.
Qco	Colluvium, slope wash, talus and debris flow deposits that form a veneer over most of the area shown in the map. On the east flank of the canyon they comprise cobbles and boulders of leucogranodiorite set in a locally consolidated matrix of sand and silt. On the west flank of the canyon they include mostly sand and silt derived from weathered tonalite. Forms mappable deposit only in central portion of map.
Kglg	Gregory Mountain Leucogranodiorite. Phaneritic texture with medium to coarse crystallinity. Light gray to buff with less than 5% dark minerals. Forms the core of Gregory Mountain, and also forms dikes that cut older units. Outcrops shown by solid outline.
Kbt	Bonsall Tonalite. Phaneritic texture with medium to coarse crystallinity. Dark gray. Typically deeply weathered and friable. Outcrops shown by solid outline.
Tjm	Metamorphic rocks. Amphibolites and metavolcanic rocks, in some locations with migmatitic structure that resembles gneissic banding. Aphanitic to porhyroblastic texture; relict porphyritic textures suggest a volcanic protolith for some of the units. Medium to dark blueish gray. Generally massive and hard.
	Photolineaments defined by single stretches of a drainage,
	Photolineaments defined on the basis of geomorphology (e.g., alignment of topographic saddles, linear cliff scarps) or tonal differences.
	Photolineaments related to recognizable fractures or dikes.
A — A'	Location of geologic cross-section.

- Strike and dip of foliation
- Vertical foliation
- Strike and dip of joints
- Strike and dip of dike
- Brecciated bedrock
- Outcrop of bedrock
- Geologic contact
- Geologic contact obscured by surficial deposits
- MW-3 Monitoring well by others
- GLA-5 Monitoring well by GLA
- **GLA-18 Proposed monitoring well**
- LINE 1 Survey line mapped for discontinuities

VLF Anomaly Locations:
(Hatchures indicate broad anomalous zones)

- NLK (Jim Creek, WA; 24.8 kHz); includes local transmitter (16.55 kHz) anomalies along line E
- NAA (Cutler, ME; 24.0 kHz)
- NPN (Lualualei, HI; 21.4 kHz)
- A — A' VLF Traverse

N

GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 ft.

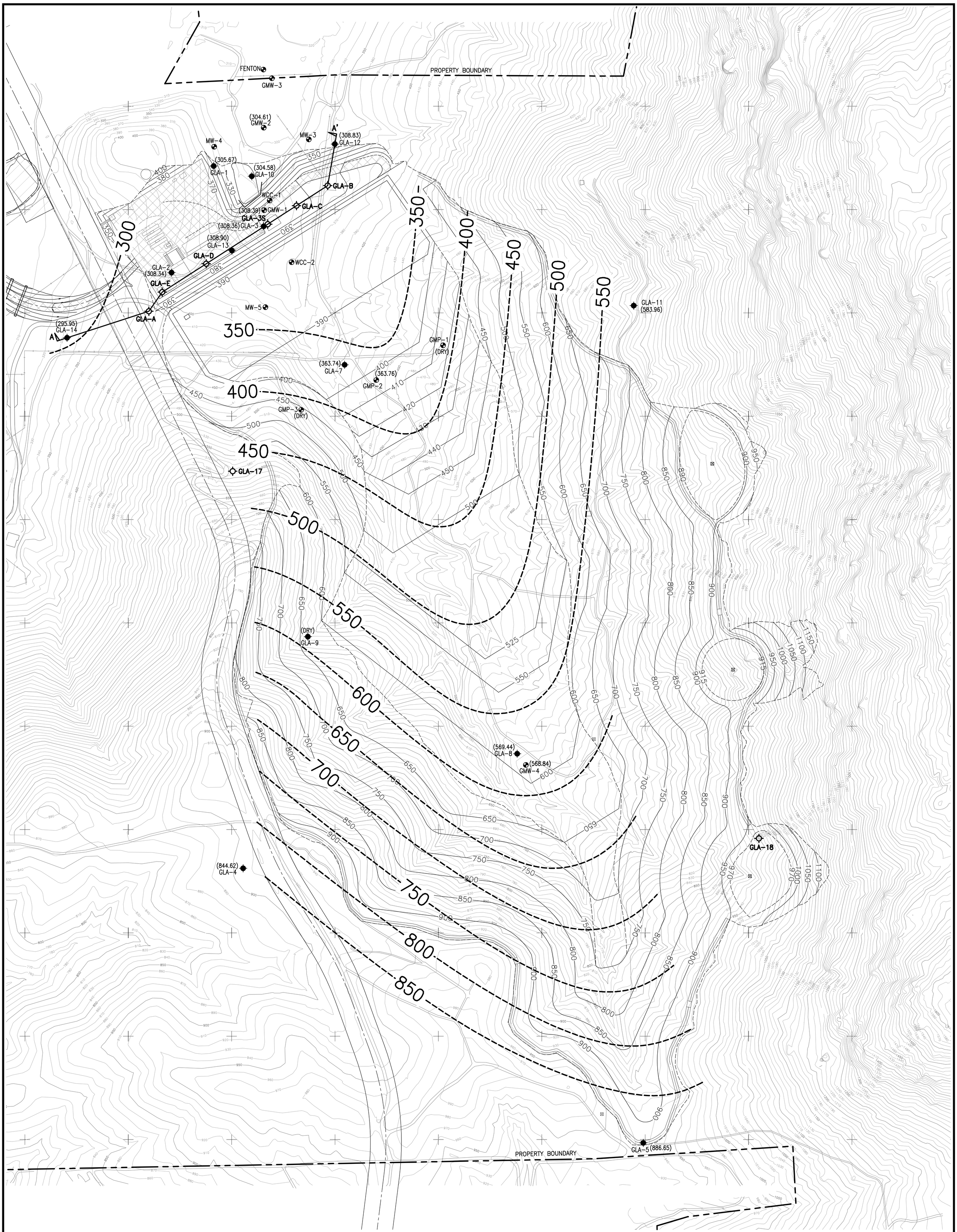
PLATE 1

GEOLOGIC MAP

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MARCH 2004	9539



EXPLANATION:

- PROPOSED GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL BY GLA
- GROUNDWATER MONITORING WELL BY OTHERS
- (844.62) GROUNDWATER ELEVATION (MARCH 2000)
- 700 BOTTOM GRADE CONTOURS
- 700 PIEZOMETRIC SURFACE ELEVATION CONTOUR (MARCH 2000)
- A — A' LOCATION OF GEOLOGIC CROSS-SECTION.

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)

1 inch = 200 ft.

N

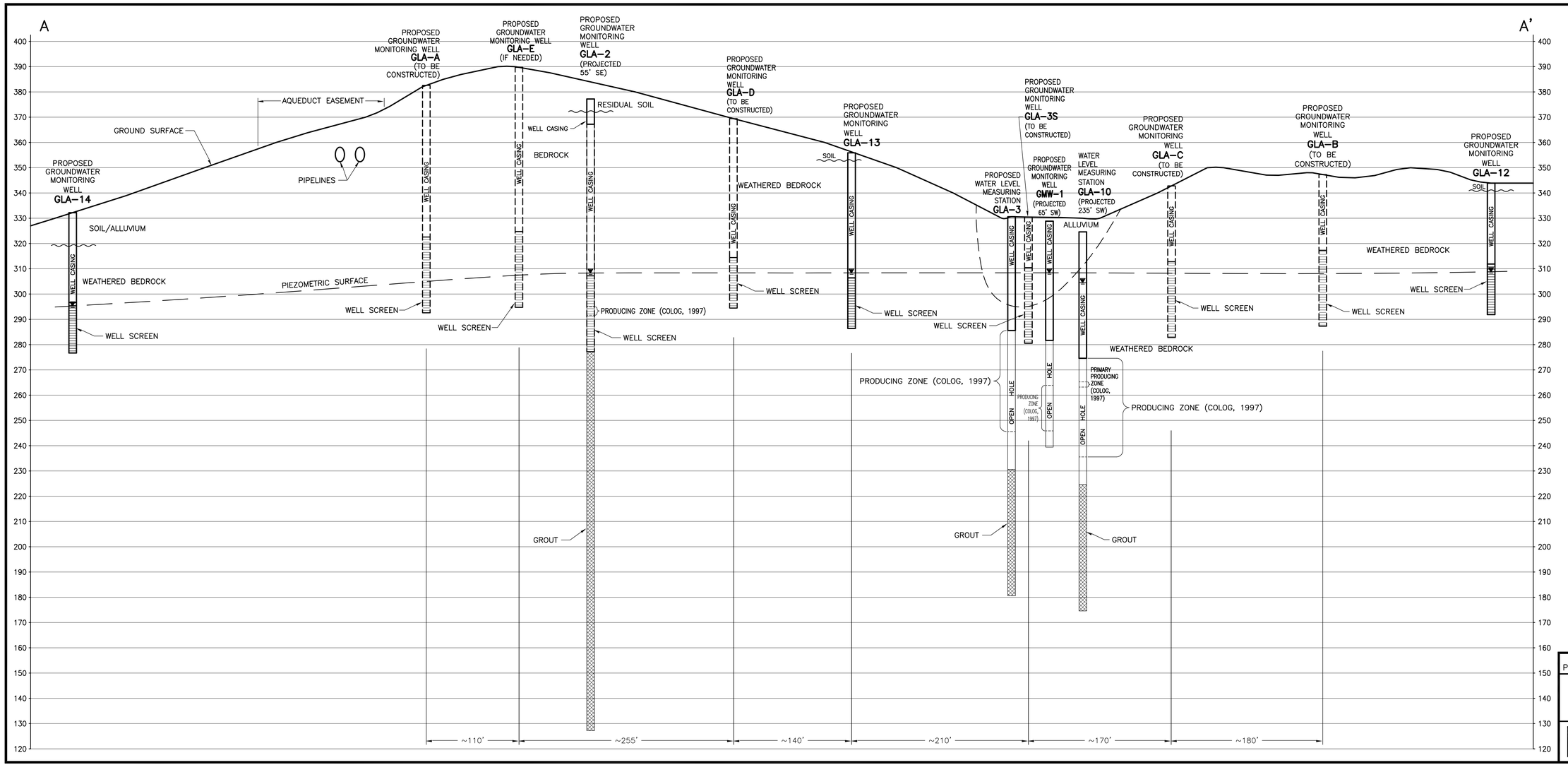
PLATE 2

HYDROGEOLOGIC CONTOUR MAP WITH LANDFILL EXCAVATION PLAN

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MARCH 2004	9539



PROFILE SCALES
HORIZ.: 1" = 60'
VERT.: 1" = 20'

PLATE 3

DETECTION MONITORING PROGRAM
POINT-OF-COMPLIANCE WELLS CROSS-SECTION

GEOLOGY, HYDROGEOLOGY AND GEOTECHNICAL ANALYSES
GREGORY CANYON LANDFILL
SAN DIEGO COUNTY, CALIFORNIA

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	MARCH 2004	9539

ATTACHMENT 1

BORING LOGS AND WELL CONSTRUCTION LOGS

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMW-1

See Plate 3 for Location	SITE NAME AND LOCATION: Gregory Canyon, near Pala, California				BORING NO. GMW-1
	DRILLING METHOD: Air Rotary/Mud Rotary				SHEET 1 OF 3
	HOLE DIAMETER: 10-inch (0 to 48 feet)				DRILLING
	5-inch (48 to 54 feet)				START / FINISH
	4.25-inch (54 to 90.5 feet)				
	WATER LEVEL	21.25	22.48		TIME / TIME
	TIME	—	—		— / —
	DATE	8-13-90	9-5-90		DATE / DATE
DATUM: M.S.L. ELEVATION: 331.36	CASING DEPTH	48.0			8-7-90 / 8-10-90

DRILLING: Mobile B-61XD Rotary w/Christensen Coring

SURFACE CONDITIONS: Soil & Boulders

ANGLE: Vertical

Note: Reference measurement points for lithology from ground surface; water levels from top of casing in feet.

SAMPLE HAMMER TORQUE: Not Applicable

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**ALLUVIUM** (Qal_3) Contains sand, silt, gravel, and boulder material.		Not Applicable	Cuttings From Mud Circulation	Refer to Well Constuction Summary	Not Applicable
5						**COLLUVIUM** (Qc) Crystalline boulders in silty fine to medium sand matrix, light brown (5yr 5/6), quartzitic with horneblende.					
10						Increasing medium to coarse sand, some wood fragments.					
15						Rig chatter at 15.5, to 16.5 feet.					
20						Becomes medium sand (contains hornblende) with wood fragments. Moderate yellow brown (10yr 5/4).					
						Some drilling fluid loss at 24.0 feet.					
25						Increasing sand and gravel content moderate brown, (5yr 3/4).					

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-1

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	RECOVERY	RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30						Crystalline boulders in Silty Sand matrix light brown (5yr 5/6), slightly moist, fine to medium Sand, quartzitic with hornblende.		Not Applicable	Cuttings		
		1	0	100	0	**BONSALL TONALITE** (Kb), weathered Wet, moderate yellow brown, (5yr 4/4) to dark yellow brown (10yr 4/2) w/gravel fragments; Contains hornblende, plagioclase, biotite;			Christensen Wire Line Coring	Refer To Well Construction Summary	Not Applicable
35		2	0	0	0						
40		3	0	20	0	Becomes grayish black (2n2), friable "salt-and-pepper" texture; medium to coarse grained at 40 feet.					
45		—	—	—		Depth of hole miscalculated at 45 feet, actual depth 48 feet.					
50		4	2	100	50	Highly fractured.		N5W;40°E fracture			
55		5	8	100	90	**LEUCOGRANODIORITE** (Klm) Wet, moderate yellow brown (5yr 4/4), porphyritic texture, highly fractured; medium-grained dike Highly weathered.		N5W;20°S weathered surface N5W;60E,1/10" apeture infilled w/calcite			
60		6	5	100	50	Quartz & Calcite infilling, at 65 feet. Weathered porphyritic dike; with 1.0' chalk-like zone, pinkish gray (5yr 8/1) at 66 feet.		N50W;65W Iron-stained fracture N80E;60°N fracture N5W;82°E fracture N5W;85°W fracture			
65											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-1

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 3 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
		7	6	100	70	Becomes moderately fractured.			Christensen Wire Line Coring	Refer To Well Construction Summary	Not Applicable
70		8	5	100	80	**BONSALL TONALITE** (Kb), weathered Wet, medium dark gray (3n3), highly fractured, contains hornblende, quartz, biotite; some ironstaining along fractures; 1/8" quartz & Hornblende crystals.		N6W;42°E fracture			
75		9	3	100	65	Becomes moderately fractured at 76 feet.					
80		10	3	100	50	Fracture containing quartz and calcite infilling. Friable, gravel & sandy clay material zone at 80 feet.		N5W;60°E fracture			
85		11	2	100	20.	**LEUCORANODIORITE** (Klm) Wet, very light gray (8n8), gneissic texture Moderately fractured, gray with crystals of quartz, plagioclase and some biotite.		N5W;78°E fracture N80W;72°N fracture			
90						**BONSALL TONALITE** (Kb), unweathered Wet, medium dark gray (3n3)		N80W;80°E fracture			
						Bottom of hole at 90.5 feet.					
95											
100											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

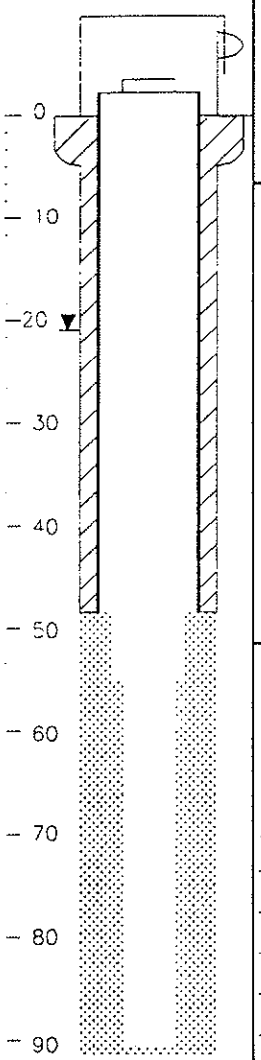
DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

Well No. GMW-1

Boring No. X-Ref: –

MONITOR WELL CONSTRUCTION SUMMARY



Survey Coords: _____

Elevation Ground Level 329.840

Top of Casing 331.360 feet

Drilling Summary:

Total Depth 90.5 feet

Borehole Diameter 10 Inches

Casing Stic-up Height: 1.50 feet

Driller H-F Drilling, Fullerton, Ca

Rig Mud Rotory/Air Rotory

Bit(s) Tungsten/Diamond

Drilling Fluid: Mud/Air

Protective Casing 5" Steel Conductor

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	7/7/90		7/13/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			7/9/90	
Development:			9/5/90	

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth			String(s)	Elevation		
+1.50	–	48.0	C1		–	
48.0	–	54.0	S1		–	
54.0	–	90.5	S2		–	
	–				–	
	–				–	

Casing: C1 5" Steel Conductor

C2

Screen: S1 5.0" Diam. Open Hole

S2 4.25" Diam. Open Hole

Filter Pack: None-Open hole

Grout Seal: 0-48.0 feet Enviroplug (Bentonite)

Bentonite Seal:

Well Development:

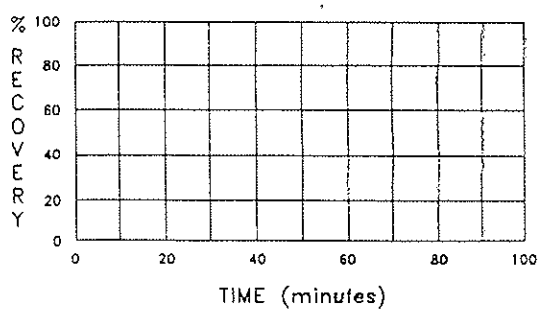
Depth to water 34.25 (8/17/90) erroneous?

Depth to water 22.48 (9/5/90)

Development Data:

Q= S_o=

Time	pH	Spec. Cond.	Temp (°F)
11:15	7.63	918 UMhos/cm	73.5
11:30	7.51	190 UMhos/cm	71.9
11:45	7.09	910 UMhos/cm	70.8
12:00	7.19	920 UMhos/cm	71.2



Comments: Depth to water after drilling: 21.25" below grade (8/13/90)

T.D. 90.5 ft.

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMW-2

See Plate 3 for Location

SITE NAME AND LOCATION					BORING NO.
Gregory Canyon, near Pala, California					GMW-2
DRILLING METHOD: Mud Rotary & Air Rotary					SHEET
HOLE DIAMETER: 10-inch (0-50 feet)					1 OF 4
4.25-inch (50-103 feet)					DRILLING
4-inch (103-106 feet)					START / FINISH
WATER LEVEL	19.50	17.04			TIME / TIME
TIME	—	—			— / —
DATE	8-17-90	9-5-90			DATE / DATE
CASING DEPTH	50.0				8-13-90 / 8-17-90

DATUM: M.S.L. ELEVATION: 324.64

DRILLING: Mobile B-61XD Rotary w/Christensen Coring

ANGLE: Vertical

SAMPLE HAMMER TORQUE: Not Applicable

SURFACE CONDITIONS: Soil & Surface

Note: Reference measurements points for lithology from ground Surface; Water levels from Top of Casing

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**ALLUVIUM** (Qal_2)		Not Applicable	Cuttings From Mud Circulation	Refer to Well Constuction Summary	Not Applicable
						Silty sand & silt, dark yellow brown (10yr 5/4).					
5											
10						More fine to coarse sand, moderate yellow brown (10yr 5/4) contains quartz, hornblende, plagioclase, at 10 feet.					
15						Medium to coarse sand at 15 feet, more coarse sand sized grains of hornblende.					
20						Fine to medium sand at 20 feet, light brown (5yr 5/6), less hornblende grains.					
						Rig chatter at 22 feet.					
25											

DRILLING CONTRACTOR H.F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-2

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 OF 4

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable				Cuttings		
35		1	0	50	0	Clayey sand with gravel sized fragments of quartz slightly micaceous, light brown (5yr 5/6). Clay at 37 feet, moderate brown (5yr 4/4). Clayey sand with fine to coarse quartzitic gravels.			Christensen Wire Line Coring	Refer to Well Construction Summary	Not Applicable
40		2	0	50	0						
45		3	0	20	0	**BONSALL TONALITE** (Kb) weathered Moist medium gray (5n5), fine to coarse gravel-sized fragments up to 2" in diameter, highly fractured. Phaneritic texture. Missing 3 feet section from 50-53 feet.					
50		4	2	33	20						
55		5	2	100	50	Becomes dark yellow brown (10yr 4/2), friable at 55 feet. Wet, medium dark gray (4n4); quartz-filled fracture at 57 feet.		NSW;35°E fracture			
60		6	0	20	0	Grayish black (2n2), friable gravel-sized fragments up to 1", 3"-wide fracture infilled w/white quartz.					
65											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-2

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 3 OF 4

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	RECOVERY	RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
		7	5	100	40	Moist, grayish black (2n2), "salt-and-pepper" texture, medium grained, highly fractured.		N30W;45°NE fracture	Christensen Wire Line Coring	Refer to Well Construction Summary	Not Applicable
70		8	4	100	70	Becomes very moist, dark gray (3n3), with quartz infilled fractures, iron-stained 68 to 71 feet. Becomes grayish black (2n2), with quartz-infilled fracture, moderate orange pink (5yr 8/4), highly fractured.		N30W;45°NE fracture; N5W;52°E fracture; N40E;40°E fracture			
75		9	4	100	50	0.2" wide iron-stained, quartz-filled fracture at 77 feet. 2"-wide gravelly quartz infilled fracture.		N80W;62°S iron-stained fracture; N5W;56°S fracture			
80		10	2	70	20	Wet, moderate yellow brown (10yr 5/4), quartz veinlets & silty sand fracture infilling. Becomes grayish black (2n2) without quartz veinlets, at 82 feet.		N5W;30°E fracture; N80E;62°S pyrite-bearing fracture			
85		11	3	90	60	Gravel-sized fragments, highly micaceous with biotite flakes. Grades into more competent bedrock at 87.0'. Moderate yellow brown (10yr 5/4) to dark gray (4n4). Medium light gray (6n6) "salt-and-pepper" texture, with conchoidal fracturing, moderately fractured.		N80W;80°E fracture			
90		12	4	100	90	**BONSALL TONALITE** (Kb) unweathered. Medium light gray (6n6), aphanitic texture, highly fractured iron-stained with calcite infilling.		N5W;74°W fracture			
95		13	3	100	95	0.5"-wide quartz-filled fracture.		N30E;41°W fracture; N5W;85°E fracture			
100		14	4	100	95	Pyrite-bearing and iron-stained fracture. 2"-wide filled fracture.		N82°E;42N fracture; N5W;42°W fracture			

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-2

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 4 OF 4

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
		15	3	100	100			N5W;30°W fracture			
105		16	1	100	100	Medium light gray (6n6), aphanitic texture, moderately fractured at 103.0', iron-stained.		N80E;20N fracture			
						Bottom of hole at 106.0 feet.					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

Well No. GMW-2

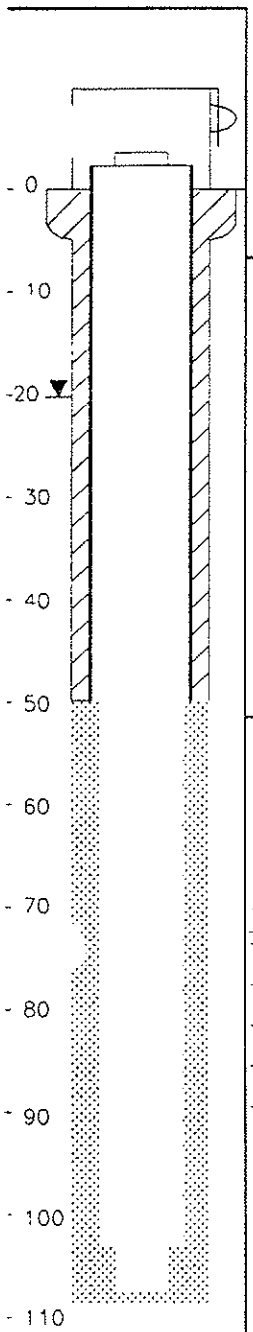
Boring No. X-Ref: –

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____

Elevation Ground Level 322.56

Top of Casing 324.640 feet



T.D. 106.0 ft.

Drilling Summary:

Total Depth 106.0 feet
Borehole Diameter 10 Inches
Casing Stic-up Height: 2.10 feet
Driller H-F Drilling
Fullerton, Ca

Rig Mud Rotory/Air Rotory
Bit(s) Chris. Bit/Diamond Bit

Drilling Fluid: Mud/Air

Protective Casing 5" Steel Conductor

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	8/13/90		8/14/90	
	8/17/90		8/17/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			8/13/90	
Development:			9/5/90	

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth			String(s)	Elevation
+ 2.1	–	50.0	C1	–
50.0	–	103.0	S1	–
103.0	–	106.0	S2	–
	–			–
	–			–

Casing: C1 5" Steel Conductor
C2

Screen: S1 4.25" Diam. Open Hole
S2 4" Diam. Open Hole

Filter Pack: None

Grout Seal: 0-50.0 feet Enviroplug (Bentonite)

Bentonite Seal:

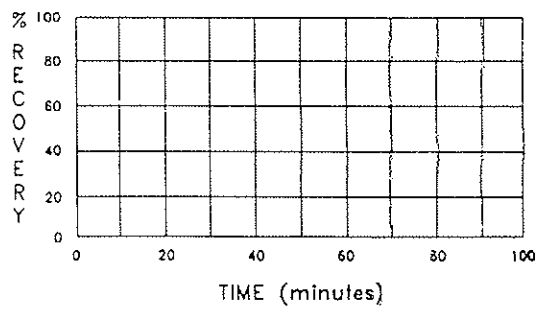
Well Development:

DTW 15.50' below grade
8/17/90 prior to drilling
additional 15.0'
Depth to water 17.04 (9/05/90)

Development Data:

Q= S_o=

Time	pH	Spec. Cond.	Temp (°F)
10:00	7.65	930 UMhos/cm	72.2
10:15	7.38	909 UMhos/cm	70.8
10:25	7.37	902 UMhos/cm	70.4
10:30	7.38	903 UMhos/cm	71.1
10:40	7.35	919 UMhos/cm	71.9



Comments: Depth to water after drilling:
19.50' (8/14/90)

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMW-3

See Plate 3 for Location	SITE NAME AND LOCATION: Gregory Canyon, near Pala, California					BORING NO. GMW-3
	DRILLING METHOD: Hollow Stem Auger					SHEET 1 OF 2
	HOLE DIAMETER: 10-inch (0-50 feet)					DRILLING
						START / FINISH
	WATER LEVEL	12.33	12.38			TIME / TIME
	TIME	—	—			— / —
	DATE	7-23-90	9-5-90			DATE 7-23-90 / DATE 7-23-90
DATUM: M.S.L. ELEVATION: 320.36	CASING DEPTH	50.0				

DRILLING: Failing F-10 WT

ANGLE: Vertical

SAMPLE HAMMER TORQUE: Not Applicable

SURFACE CONDITIONS: Soil & Boulders

Note: Reference measurement points for lithology from ground surface; water-levels from top of casing in feet.

DEPTH IN FEET	SAMPLE INTERVAL	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
5	1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**ALLUVIUM** (Qal_1) Poorly graded fine to medium, SAND (SP) slightly moist; light brown (5 yr 6/4).		Not Applicable	Split Spoon Sampler	Refer to Well Constuction Summary	Not Applicable
10	2					SILTY SAND (SM) pale yellowish brown (10yr 6/2), with interbeds of sand.					
15	3					GRAVELLY SAND (SW) Fine to coarse sand, little fine gravel; "salt-and-pepper" horneblende & quartz; medium light gray (6n6), wet.					
20	4					Gravel (up to 1"-diameter) at 20'. Becomes more cobbly.					
25	5					SAND (SP-SM) with silt. Becomes moderate reddish brown (10yr 4/6) to dark gray (3n3) at 24.5'.					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-3

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 OF 2

DEPTH IN FEET	SAMPLE INTERVAL	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30	6	Not Applicable	Not Applicable	Not Applicable	Not Applicable	CLAYEY SAND (SC) w/1"-diameter leucogranodiorite gravel, moderate brown (5yr 4/6). Easier drilling at 30'.		Not Applicable	Split Spoon Sampler	Refer to Well Construction Summary	Not Applicable
35	7					Cobbles & boulders sightly moist; yellowisn gray (5yr 8/1)					
40	8					SAND (SP) 1.0' thick, light brown (5yr 5/6); moist; very micaceous fine sand at 43 feet.					
45	9					CLAYEY SAND (SP) Very difficult drilling at 49 feet.					
50						Bottom of boring at 50.0 feet. (Refusal)					
55											
60											
65											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

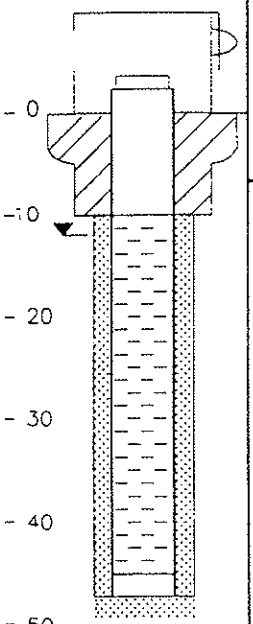
LOGGED BY Amr. M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

Well No. GMW-3

Boring No. X-Ref: –



MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____ Elevation Ground Level 318.46

Top of Casing 320.360 feet

Drilling Summary:

Total Depth 49.5 feet

Borehole Diameter 10 Inches

Casing Stic-up Height: 2.50 feet

Driller H-F Drilling, Fullerton, Ca

Rig Hollow Stem Auger

Bit(s) _____

Drilling Fluid: None

Protective Casing Steel looking well cover

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	7/23/90		7/23/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			7/23/90	
Development:			9/5/90	

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth		String(s)	Elevation
+2.25	9.5	C1	
9.50	49.5	S1	

Casing: C1 4" diam. PVC Blank

C2 _____

Screen: S1 4" diam. 0.02 slotted PVC

C2 _____

Filter Pack: 2/12 Sand

Grout Seal: 2.5-6.5 feet Enviroplug (Bentonite)

Bentonite Seal: _____

Well Development:

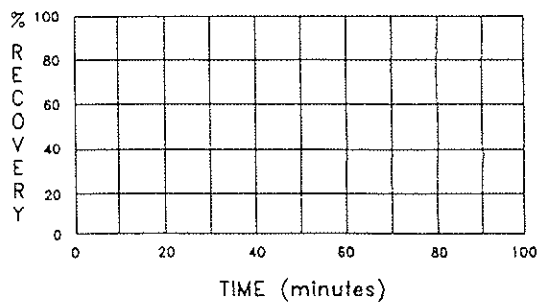
Depth to water 12.60' (8/17/90)

Depth to water 12.38' (9/05/90)

Development data:

Q= S₀=

Time	pH	Spec. Cond.	Temp (°F)
8:30	7.83	1020 UMhos/cm	73.5
8:50	7.69	960 UMhos/cm	69.0
9:10	7.70	970 UMhos/cm	68.0



Comments: Depth to water after drilling: 12.83' (7/23/90)

T.D. 49.5 ft.

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMW-4

See Plate 3 for Location	SITE NAME AND LOCATION: Gregory Canyon, near Pala, California				BORING NO. GMW-4	
	DRILLING METHOD: Air Rotary				SHEET 1 OF 4	
	HOLE DIAMETER: 10-inch (0-55 feet)				DRILLING	
	4.25-inch (55-98.5 feet)				START	FINISH
	4-inch (98.5-116 feet)				TIME	TIME
	WATER LEVEL	76.0	85.71			
	TIME	—	—		—	—
	DATE	8-17-90	9-5-90		DATE	DATE
DATUM: M.S.L. ELEVATION: 637.530	CASING DEPTH	55.0			8-15-90	8-17-90

DRILLING: Mobile B-61XD Rotary w/Christensen Coring

SURFACE CONDITIONS: Soil & Boulders

ANGLE: Vertical

Note: Reference measurement points for lithology from ground surface; water level from top of casing in feet.

SAMPLE HAMMER TORQUE: Not Applicable

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**COLLUVIUM** (Qc) Crystalline boulders in silty fine to medium sand matrix, moderate brown (5yr 4/4), quartzitic with hornblende		Not Applicable	Cuttings From Air Circulation	Refer to Well Constuction Summary	Not Applicable
5						Very fine to fine sand, grayish yellow green (5yr 7/2).					
10						Becomes light olive gray (5yr 5/2) at 10 feet.					
15						Little medium sand from 14 feet.					
20						Fine to coarse sand, light olive gray (5yr 5/2) at 20 feet.					
25						Fine to medium sand from 25 feet. (5yr 3/4).					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-4

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 of 4

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2x CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Air Rotary Cuttings	Refer to Well Construction Summary	Not Applicable
35						Fine sand, moderate olive brown (5yr 4/4), encountered at 35 feet.					
40						Fine to medium sand from 40 feet.					
45						Fine sand, light olive gray (5yr 5/2).					
						Difficult drilling from 47.0'.					
50						**BONSALL TONALITE** (Kb) weathered Moist, light brown (5yr 5/6) bedrock, with "salt-and-pepper" texture, highly fractured. Hornblende and quartz crystals.					
55						Iron-stained					
		1	2	100	10	Medium grained crystals of hornblende, biotite and quartz, from 57 feet.			Christensen Wire Line Coring		
60						Becomes dark yellowish orange (10yr 6/6), friable, grus 0.5" thick, with calcite. Yellow and black mottling.					
		2	4	100	70						
65						Iron-stained fracture at 65 feet.		N5W;52W iron-stained fracture			

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-4

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 3 OF 4

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	RECOVERY	RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	3	4	100	70	Medium gray (5n5), moderately fractured with phaneritic texture, appears iron-stained with silty sand fracture infilling.			Christensen Wire Line Coring	See Well Construction Summary	Not Applicable
70		4	3	100	40	Moist, dark yellow orange (10yr 6/6), very soft calcite zone at 72 feet.		N6W;42°E iron-stained fracture			
75		5	5	100	90	Very moist, pale olive (10yr 6/2), highly fractured with abundant quartz veins, calcite-infilled fractures with solution pitting at 75 feet.					
80		6	5	100	50	Weathered fracture is dark orange brown, near vertical, fracture is weathered at 80 feet. Greenish gray (5yr 6/1), iron-stained fracture with silty sand infilling at 82 feet.		N80E;83°N fracture N5W;80°W fracture			
85		7	4	100	60			N30W;70°W fracture			
						Dark gray (3n3); wet with iron-stained fractures.					
90		8	6	100	75	**BONSALL TONALITE** (Kb) unweathered Fracture infilled, wet, medium gray (3n3), aphanitic texture highly fractured. Quartz dike 0.2"-wide with zoned hornblende and biotite inclusions at 92.0 feet.		N5W;42°W iron-stained fracture N5W;55°W fracture N17W;42°E fracture N5W;42°W fracture			
95		9	4	100	45	1"-wide fracture zone with calcite infilling at 94 feet.		N80E;64°N fracture			
100		10		100	30	0.1"-wide calcite-filled fracture.		N79E;74°N fracture			

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMW-4

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 4 OF 4

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
105		11	7	100	90	Wet, medium gray (3n3), aphanitic texture, highly fractured, with calcite infilling fracture. Ironstained fracture 0.1"-wide Calcite infilled fracture. Conjugate fractures 2" apart. 1"-wide Calcite filled fracture.		N50E;49°E fracture N80E;52°S fracture N80E;52°S fracture N5W;45°W fracture N58E;50°N fracture N8W;60°W fracture	Christensen Wire Line Coring	Refer to Well Construction Summary	Not Applicable
110		12	5	100	95	1/2"-wide iron-stained fractured infilled with gray flourite & calcite. Iron-stained fracture		N80E;46°S fracture N80E;46°S fracture			
115		13	5	100	95	Dark yellow orange (10yr 6/6) iron-stained, calcite-filled fracture. Calcite-filled fractures.		N8W;55°E fracture N70E;45°S fracture N80W;85°N fracture			
120 125 130 135						Bottom of boring at 116.0 feet.					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

Well No. GMW-4

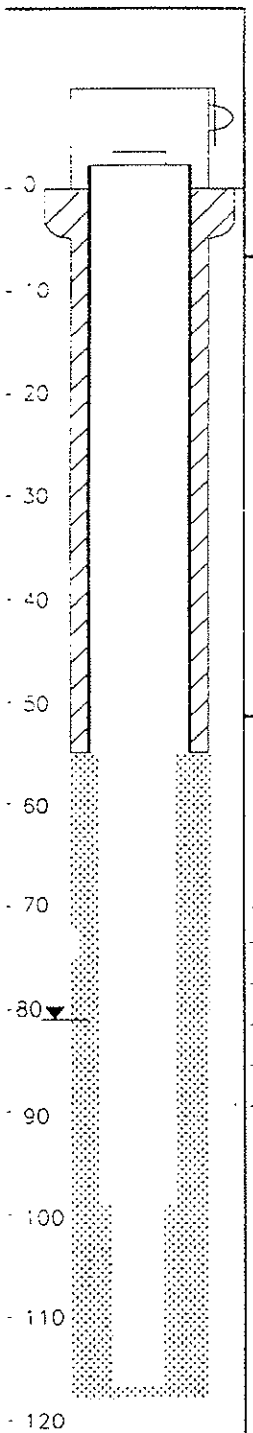
Boring No. X-Ref: –

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____

Elevation Ground Level: Approximately 635.280

Top of Casing: 637.530 feet



Drilling Summary:

Total Depth: 116.0 feet

Borehole Diameter: 10 inches

Casing Stic-up Height: 2.25 feet

Driller: H-F Drilling, Fullerton, Ca

Rig: Air Rotary

Bit(s): Christiansen/Bit/Diamond

Drilling Fluid: Air

Protective Casing: _____

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	8/15/90		8/17/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			8/15/90	
Development:			9/5/90	

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth			String(s)	Elevation
+2.25	–	55.0	C1	–
55	–	98.5	S1	–
98.5	–	116.0	S2	–
	–			–
	–			–

Casing: C1 5" Steel Conductor

C2 _____

Screen: S1 4.25" Diam Open Hole

C2 4.00" Diam. Open Hole

Filter Pack: None

Grout Seal: 0–55.0 feet Enviroplug (Bentonite)

Bentonite Seal: _____

Well Development:

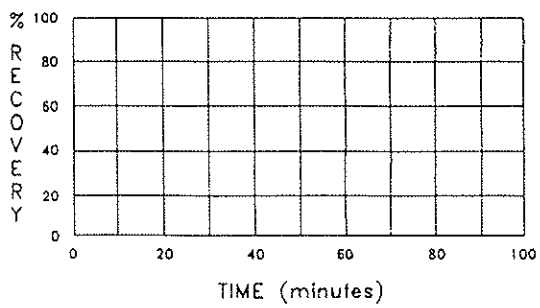
Depth to water 80.75 (8/17/90)

Depth to water 85.71 (9/05/90)

Development Data:

Q= S_o=

Time	pH	Spec. Cond.	Temp (°F)
12:55	7.61	1042 UMhos/cm	75.5
1:10	7.24	995 UMhos/cm	72.2
1:25	7.46	1027 UMhos/cm	71.6
1:45	7.51	1020 UMhos/cm	70.5



Comments: Depth to water after drilling: 80.75 feet (8-17-90)

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMP-1

See Plate 3 for Location	SITE NAME AND LOCATION: Gregory Canyon, near Pala, California				BORING NO. GMP-1
	DRILLING METHOD: Air Rotary & Mud Rotary				SHEET 1 OF 3
	HOLE DIAMETER: 10-incn (0-41 feet)				DRILLING
	5-incn (41-81 feet)				START / FINISH
	WATER LEVEL	76.0	63.88		TIME / TIME
	TIME	—	—		— / —
	DATE	7-3-90	8-6-90		DATE 7-31-90 / DATE 8-2-90
DATUM: M.S.L. ELEVATION: 460.29	CASING DEPTH	48.0			

DRILLING: Mobile B-61XD Rotary w/Christensen Coring

ANGLE: Vertical

SAMPLE HAMMER TORQUE: Not Applicable

SURFACE CONDITIONS: Soil & Boulders

Note: Reference measurement points for lithology from ground surface; water levels from top of casing in feet.

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**COLLUVIUM** (Qc) Crystalline boulders in silty fine to medium sand matrix, light brown (SYR 5/6).		Not Applicable	Cuttings	Refer to Well Constuction Summary	Not Applicable
						Silty sand, yellowish gray (5yr 7/2).					
5											
10						Increasing fine to medium sand, dark gray (3n3), little yellow quartzitic fine to medium gray (5n5) at 12 feet.					
15						Becomes grayisn black (2n2), trace yellow quartzitic sand					
20						Becomes coarse sand, medium dark gray (4n4), little quartz fragments, some leaf fragments.					
25						Slow drilling at 26.0 feet. Contains hornblende, plagioclase fragments and biotite flakes.					

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMP-1

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Matrix becomes medium gray (5n5).			Cuttings	Refer to Well Construction Summary	Not Applicable
35						Increasing coarse sand, some small wood fragments.					
40						**BONSALL TONALITE** (Kb) weathered Slightly moist, dark yellow brown (10yr 4/2), highly fractured, 0.5-1.0' fracture spacing.			Christensen Wire Line Coring		
		1	2	66	10			N5W,60°E fracture			
45		2	1	80	10	missing 46-47 feet. Fracture infilling. Silty sand and iron-staining.		N80E;66°N fracture			
50		3	2	100	15	Rock sample collected for thin section analysis at 51 feet. Classified as a Quartz Gabbro, see sample GMP-1-51, in Appendix F. Medium grained plagioclase crystals w/hornblende & biotite, vein filled w/calcite.		N5W,62°E fracture			
55		4	4	60	30	Moderate yellow brown (10yr 5/4). Poikilitic texture at 55 feet. Missing 56-58 feet.		N5W,71°E fracture			
60		5	5	100	80	White chalky material in-filling fracture at 60 feet. Moist, medium Gray (5n5), Ironstained. 2"-wide in-filled vein, slightly moist, light brown (5yr 6/4).		N5W,80°E fracture			
65											

DRILLING CONTRACTOR Hi-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMP-1

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

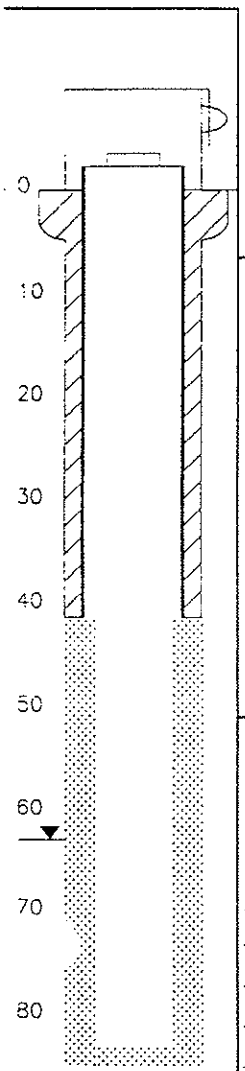
SHEET 3 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	6	5	90	80	Medium gray (5n5), highly fractured. With hornblende, and "salt-and-pepper" texture, dark gray (3n3) at 70 feet. iron-stained, calcite-infilled fracture, white (9n9).		N80W;45°N fracture N84E;74°N Ironstained fracture.	Christiensen Wireline	Refer to Well Construction Summary	Not Applicable
70		7	6	100	80			N6W;74°E fracture			
75						Medium grained plagioclase with biotite, 1/8"-wide vein in-filled with white calcite.		N5W;62°E infilled fracture			
		8	5	90	70	Rock sample collected for thin section analysis at 76 feet classified as quartz gabbro, see sample GMP-1-76 in Appendix, F. 1.0'-wide sandy silt in-filled fracture, yellowish gray (5yr 7/2), white (9n9). Vein in-filling.		N6W;72°E fracture			
80						Medium gray (5n5). Very friable.					
						Bottom of boring at 81.0 feet.					
85											
90											
95											
100											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW



Waste Management, Inc.

Well No. GMP-1

Boring No. X-Ref: –

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____

Elevation Ground Level: Approximately 459.0

Top of Casing: 460.290 feet

Drilling Summary:

Total Depth: 81.0 feet

Borehole Diameter: 10 inches

Casing Stic-up Height: 1.28 feet

Driller: H-F Drilling, Fullerton, Ca

Rig: Mud Rotory/Air Rotory

Bit(s): Tungsten Bit.

Drilling Fluid: Mud/Air

Protective Casing: 5" Steel Conductor

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	7/31/90		8/2/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			7/31/90	
Development:				

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth			String(s)	Elevation		
+1.28	–	41.1	C1		–	
41.16	–	81.0	S1		–	
	–				–	
	–				–	
	–				–	

Casing: C1 5" Steel Conductor

C2

Screen: S1 5" Diam. Open Hole

S2

Filter Pack: None

Grout Seal: 0-41.1 feet Enviroplug (Bentonite)

Bentonite Seal:

Well Development:

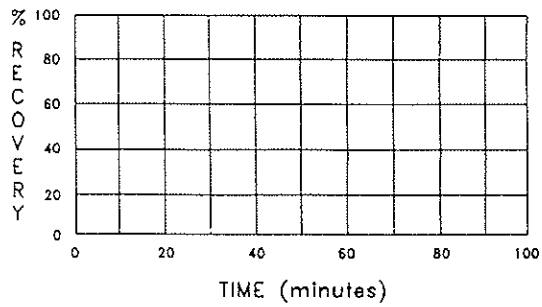
Depth to water 62.32 (8/17/90)

Depth to water 63.88 (9/5/90)

Development Data:

Q= So=

Time	pH	Spec. Cond.	Temp (°C)



Comments: Depth to water after drilling: 69.0' feet below grade. (8/2/90)

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMP-2

See Plate 3 for Location	SITE NAME AND LOCATION: Gregory Canyon, near Pala, California					BORING NO. GMP-2
	DRILLING METHOD: Air Rotary					SHEET 1 OF 3
	HOLE DIAMETER: 10-inch (0-45 feet)					DRILLING
	5-inch (45-70 feet)					START / FINISH
	4-inch (70-87.5 feet)					
	WATER LEVEL	83.36	83.74			TIME / TIME
	TIME	—	—			— / —
	DATE	7-30-90	9-5-90			DATE / DATE
DATUM: M.S.L. ELEVATION: 437.64	CASING DEPTH	44.8				7-25-90 / 7-30-90

DRILLING: Mobile B-61XD Rotary w/christensen coring

ANGLE: Vertical

SAMPLE HAMMER TORQUE: Not Applicable

SURFACE CONDITIONS: Soil & Boulders

Note: Reference measurement points for lithology from ground surface; water levels from top of casing in feet.

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**COLLUVIUM** (Qc) Crystalline boulders in silty fine to medium sand matrix, light brown (5yr 6/4), quarzitic with hornblende.		Not Applicable	Cuttings from mud Circulation	Refer to Well Constuction Summary	Not Applicable
5											
						Rig chatter at 8~~0~~ feet.					
10						Fine to medium sand, moderate yellow brown (10yr 5/4).					
15						Increasing coarse sand.					
20						Becomes brownish gray (5yr 4/1). Organic matter with wood fragments.					
25						Fewer wood fragments, grayish black (2n2).					
						Medium grained sand.					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMP-2

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	RECOVERY	RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Becomes brownish gray (5yr 4/1), at 30 feet.		Not Applicable	Cuttings	Refer to Well Construction Summary	Not Applicable
35											
40						Increasing medium to coarse sand at 40 feet.					
45		1	0	0	0				Christensen Wire Line Coring		
						BONSALL TONALITE (Kb) weathered Light gray (5yr 5/2), phaneritic texture, highly fractured with iron-stained fractures.					
50		2	0	0	0						
		3	0	100	0	Missing 52.5 to 56.0 feet.					
55		4	0	0	0						
		5	0	0	0	Missing 56.0 to 60.5 feet. Rock sample collected for thin section analysis at 58 feet. Classified as a Alkali Feldspar Granite Porhyry, See sample GMP-2-58, in Appendix F.					
60						Switched to tungsien bit to improve recovery at 60.5.		N30°W trending dike			
		6	0	100	0	Moderate yellow brown (10yr 5/4), weathered w/1/4"-wide porphyritic dike. Platy weathered abundant biotite Becomes dark gray (3n3) at 63 feet.					
65		7	0	100	0	**LEUCOGRANODIORITE** (Klm) light brown (5yr 6/4) dike material.					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMP-2

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 3 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	RECOVERY	RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	8	0	100	0	**BONSALL TONALITE** (Kb) Moderate yellow brown (10yr 5/4) phaneritic texture, highly fractured, iron-stained fractures.			Christensen Wire Line Coring	Refer to Well Construction Summary	Not Applicable
70						**LEUCOGRANODIORITE** (Klm) Light brown (5yr 6/4), porphyritic dike vein, infilled with silty sand.					
		9	2	100	20	Drilling difficult at 70.5 feet.					
75		10	3	90	25	Porphyritic texture, highly fractured		N15W;62°W fracture			
						Medium light gray (6n6) aphanitic texture, vertical micro fractures.					
80		11	3	75	20	Very light gray (8n8), phaneritic texture					
85		12	3	100	30	Less weathered, fine to medium phaneritic texture.		N20W;51°W fracture			
						Bottom of boring at 87.0 feet.					
90											
95											
100											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, inc.

Well No. GMP-2

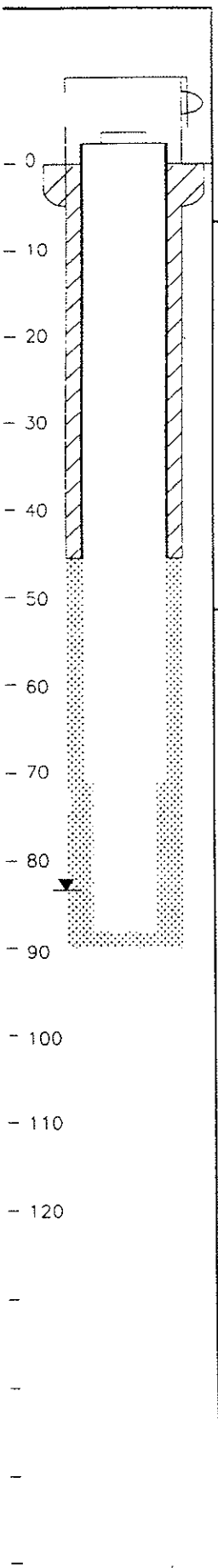
Boring No. X-Ref: –

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____

Elevation Ground Level: Approximately 436.52

Top of Casing: 437.640 feet



Drilling Summary:

Total Depth: 87.5 feet

Borehole Diameter: 10 Inches

Casing Stic-up Height: 1.12 feet

Driller: H-F Drilling, Fullerton, Ca

Rig: Mud Rotory/Air Rotory

Bit(s): Diamond/Tungsten

Drilling Fluid: Mud/Air

Protective Casing: 5" Steel Conductor

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	7/25/90		7/30/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			7/26/90	
Development:				

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth			String(s)	Elevation
+1.12	–	45.0	C1	–
45.0	–	70.0	S1	–
70.0	–	87.5	S2	–
	–			–
	–			–

Casing: C1 5" Steel Conductor

C2

Screen: S1 5" Diam. Open Hole

S2 4" Diam. Open Hole

S3

Filter Pack: None

Grout Seal: 0-45.0 feet Enviroplug (Bentonite)

Bentonite Seal:

Well Development:

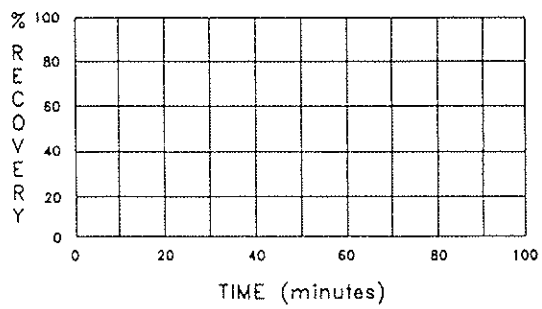
Depth to water 82.24' (8/17/90)

Depth to water 83.74' (9/05/90)

Development Data:

Q= S_o=

Time	pH	Spec. Cond.	Temp (°C)



Comments: Depth to water after drilling: 83.36' Below Grade (7/30/90)

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Waste Management, Inc.

ROCK BOREHOLE LOG WELL GMP-3

See Plate 3 for Location

SITE NAME AND LOCATION	BORING NO.
Gregory Canyon, near Pala, California	GMP-3
DRILLING METHOD: Air Rotary	SHEET 1 OF 3
HOLE DIAMETER: 10-inch (0-40 feet)	
4.25-inch (40-70 feet)	DRILLING
4-inch (70-81 feet)	START / FINISH

					START TIME	FINISH TIME
WATER LEVEL	76.0'	DRY				
TIME	—	—			—	—
DATE	8-7-90	9-5-90			DATE	DATE
CASING DEPTH	40.0				8-3-90	8-7-90

DATUM: M.S.L. ELEVATION: 469.26

DRILLING: Mobile B-61XD Rotary w/christensen coring

SURFACE CONDITIONS: Soil & Boulders

ANGLE: Vertical

Note: Reference measurement points for lithology from ground surface; water levels from top of casing in feet.

SAMPLE HAMMER TORQUE: Not Applicable

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	**BONSALL TONALITE** (Kb) weathered Silty sand, very light gray (7n7), Medium grained, phaneritic, texture.		Not Applicable	Cuttings from air Circulation	Refer to Well Constuction Summary	Not Applicable
5						More fine to coarse sand, light brownish gray (5yr 6/1) at 6 feet.					
10						Little fine gravel; medium gray (5n5) at 9 feet.					
15						Increasing fine angular gravel.					
20						Becomes fine to medium sand; pale yellow brown (10yr 6/2) at 20 feet.					
25						Fine to medium sand					

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMP-3

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 2 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	CORES: NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	CORES: RECOVERY	CORES: RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
30	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Becomes friable, moderately fractured brownish gray (5yr 4/1).			Cuttings from Air Circulation	Refer to Well Construction Summary	Not Applicable
35											
40		1	5	100	60	Becomes medium gray (5n5), moderately fractured from 40-55 feet. Highly fractured with Quartz vein infilling.		N40E;66'S fracture N50W;70'W fracture	Christensen Wire Line Coring		
45		2	4	100	75	Becomes highly micaceous, iron-stained at 45 feet. Poikilitic texture with hornblende and feldspar crystals at 47 feet. Becomes medium dark gray (4n4).		N56E;,60'S fracture N62E;60'S 1/8" calcite filled vein			
50		3	3	100	60	Becomes very light gray (8n8), quartz vein with 1/4"-wide biotite flakes. 1/8" hornblende crystals, porphyritic texture.					
55		4	6	100	70	Becomes very friable, medium gray (4n4). Light brown (5yr 5/6), iron-stained highly fractured from 56 to 68 feet. Becomes grayish black (2n2) fracture.		N54E;56'E fracture N60E;66'E fracture			
60		5	5	100	75	Becomes medium dark gray (4n4), coat quartz-filled veinlets.					
65						Very light gray (8n8), porphyritic dike.		N69'E;66'W fracture			

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

ROCK BOREHOLE LOG

BORING NO. GMP-3

SITE NAME AND LOCATION: Gregory Canyon, near Pala, California

SHEET 3 OF 3

DEPTH IN FEET	PERCENT RECOVERY	CORES: RUN NO.	NO. OF CORE-PIECES LARGER THAN 2X CORED DIAMETER	RECOVERY	RQD	SOIL DESCRIPTION OR ROCK LITHOLOGY	SYMBOL	OBSERVED ROCK STRUCTURE(S)	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING
	Not Applicable	6	1	100	10	Becomes light gray (8n8), medium grained, highly fractured.			Christensen Wire Line Coring	Refer to Well Construction Summary	Not Applicable
		7	0	100	0	**BONSALL TONALITE** (Kb) unweathered Medium gray (5n5), aphanitic texture, highly fractured. Very hard; light gray (7n7). Very hard. at 70 feet.		N58W;40°W fracture N5W;72°E iron-stained fracture			
70		8	1	100	80			N80E;70°S iron-stained fracture			
		9	2	100	40			N32°E;68°E iron-stained slightly micaceus fractured			
75								N32°E;62°W fracture			
		10	1	25	80	Fractured, iron-stained.		N5W;61°W fracture			
80											
						Bottom of boring at 81.0 feet.					
85											
90											
95											
100											

DRILLING CONTRACTOR H-F Drilling, Inc. Fullerton, Ca.

LOGGED BY Amr M. Amr

DATE 10-12-90 CHECKED BY ACW

Waste Management, Inc.

Well No. GMP-3

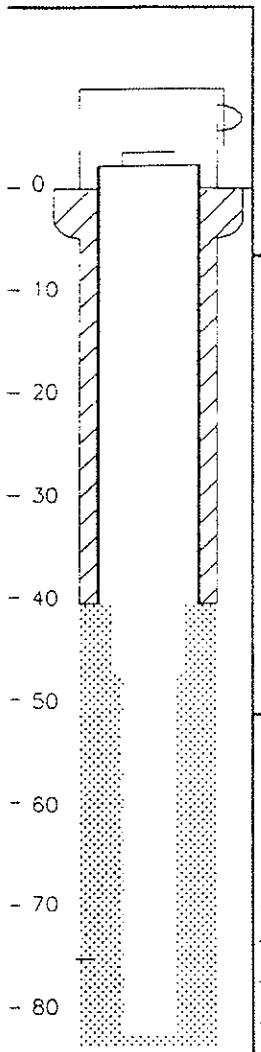
Boring No. X-Ref: –

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____

Elevation Ground Level: Approximately 467.89

Top of Casing: 469.260 feet



T.D. 81.0 ft.

Drilling Summary:

Total Depth: 81.0 feet

Borehole Diameter: 10 inches

Casing Stic-up Height: 1.55 feet

Driller: H-F Drilling, Fullerton, Ca

Rig: Air Rotory

Bit(s): Tungsten Bit/ Diamond

Drilling Fluid: Air

Protective Casing: 5" Steel Conductor

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling	8/3/90		8/7/90	
Geophys Logging:				
Casing:				
Filter Placement:				
Cementing:			8/3/90	
Development:				

Well Design & Specifications

Basis: Geologic Log x Geophysical Log

Casing String (s): C=Casing S=Screen

Depth			String(s)	Elevation		
+1.55	–	40.1	C1		–	
40.16	–	70.0	S1		–	
70.0	–	81.0	S2		–	
	–				–	
	–				–	

Casing: C1 5" Steel Conductor

C2

Screen: S1 4.25" Diam. Open Hole

S2 4" Diam. Open Hole

Filter Pack: None

Grout Seal: 40.16-0 feet Enviroplug

Bentonite Seal:

Well Development:

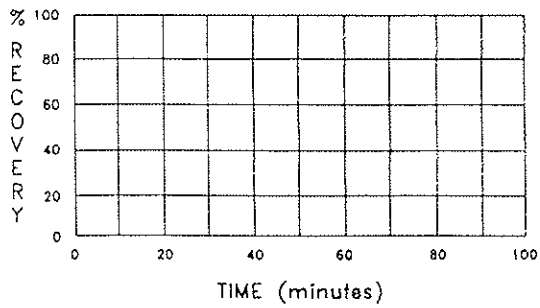
Depth to water: Dry (8/17/90)

Depth to water: Dry (9/5/90)

Development Data:

Q= So=

Time	pH	Spec. Cond.	Temp (°C)



Comments: Depth to water after drilling: 76.0' below grade. (8/7/90)

INSPECTOR: Amr M. Amr

CHECKED BY: ACW

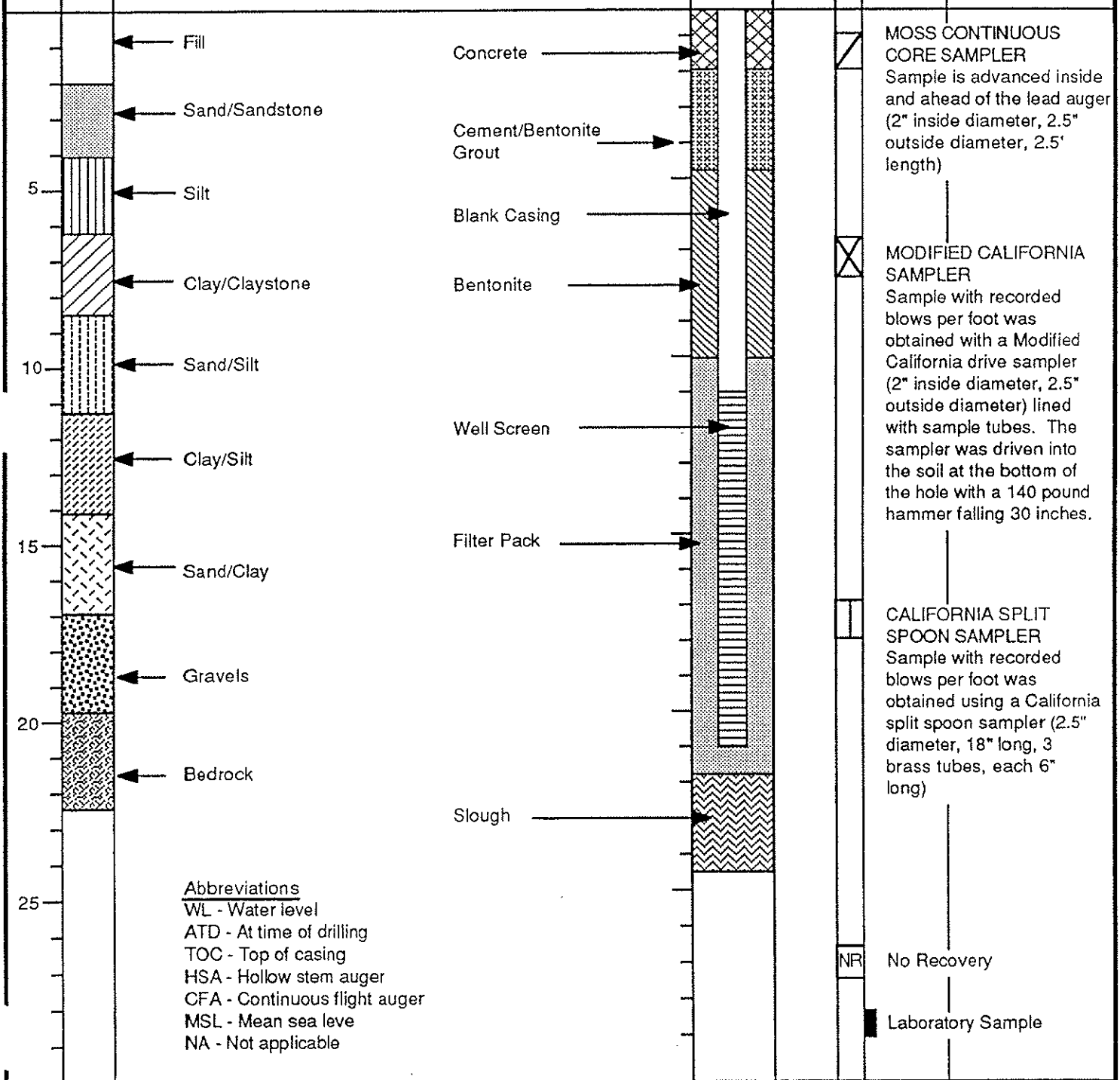
PROJECT: CA 012004

LOCATION: Gregory Canyon, near Pala, California.

Project: GREGORY CANYON		KEY TO LOGS
Logged by:	Checked by:	

Drilling Equipment:		WL Elev:	Date:	Time:
Ground Elev and Datum:		TOC Elev:		Well Cover:
WL Depth ATD:		Well Casing:		Screen:
Date Started:	Date Completed:	Filter Pack:		Seal:

Depth, ft	Geologic Log	Material Description	Well Details	Blow Counts	Sample Type	Sample No.	Notes



Abbreviations
WL - Water level
ATD - At time of drilling
TOC - Top of casing
HSA - Hollow stem auger
CFA - Continuous flight auger
MSL - Mean sea leve
NA - Not applicable

Project No: 90532203-H400	Woodward-Clyde Consultants	Figure: A-2.6

Project: GREGORY CANYON	Log of Test Boring No: B-1
Logged by: RKS	Checked by: [illegible]

Drilling Equipment: Canterra CT 212, Air Rotary, 6.5" Tricone

Ground Elev and Datum: Approximately 369', MSL

WL Depth ATD: None encountered

Date Started: 10-15-91 Date Completed: 10-15-91

Depth, ft	Geologic Log	Material Description	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		COLLUVIUM Dry, reddish brown, clayey sand (SC)					No samples retained. Logged using drill cuttings
		Cobbles/gravel					
5		Cobbles/gravel					
		Dry, reddish brown, silty, fine-grained sand (SM)					
10							
15							
		Leucogranodiorite boulder					
20		Bottom of boring at 20 feet Boring backfilled with 3/8-inch bentonite chips hydrated during placement					
25							

Project No: 90532203-H400 | Woodward-Clyde Consultants | Figure: A-2.7

Project: GREGORY CANYON

Logged by: RKS | Checked by: LAN

Log of Monitoring Well No: WCC-2 (B-2)

Drilling Equipment: Canterra CT 212, Air Rotary, 6.5" Tricone

Ground Elev and Datum: Approximately 344', MSL

WL Depth ATD: None encountered

Date Started: 10-16-91 Date Completed: 10-17-91

WL Elev: Dry Date: 10-17-91 Time: 10:00 am

TOC Elev: 346.84' Well Cover: Monument

Well Casing: 3" diam., Sch 40 PVC Screen: 0.020" slotted

Filter Pack: #2/16 Lonestar sand Seal: Bentonite chips

Depth, ft	Geologic Log	Material Description	Well Details	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		COLLUVIUM Very dense, dry, reddish brown, silty, coarse-grained sand (SM) with occasional fine gravel some mica						
5		Moist		60/ 7"			B2-5.5ft	
		Occasional boulders						
10				113/ 7"			B2-10.5ft	
		Leucogranodiorite boulder(s)						
15				100/ 9"			B2-15.3ft	
		Leucogranodiorite boulder(s)						
20								
		WEATHERED BEDROCK (TONALITE) Very dense, dark-colored plutonic rock composed of quartz and feldspar with abundant biotite and hornblende		60/ 5"			B2-22.9ft	
25								

Project No: 90532203-H400 | **Woodward-Clyde Consultants** | Figure: A-2.8

Project: GREGORY CANYON	Log of Monitoring Well No. WCC-2 (Cont'd)

epth, ft	Geologic Log	Material Description	Well Details	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		(Continued) very dense,dark-colored plutonic rock composed of quartz and feldspar with abundant biotite and hornblende		60/ 4"				
35				40/ 3"				Hole abandoned at 35'. Sampler dropped into boring. Drill new hole, 10' north, 35' total depth - no samples retained
40		Becomes more dense		130/ 6"			B2-40ft	
45				110/ 3"			B2-45ft	
50		Bottom of boring at 50 feet						
55								
60								

Project: GREGORY CANYON	Log of Test Boring No: B-3
Logged by: RKS	Checked by: LAN

Drilling Equipment: Canterra CT 212, Air Rotary, 6.5" Tricone

Ground Elev and Datum: Approximately 377', MSL

WL Depth ATD: Approximately 33'

Date Started: 10-16-91 Date Completed: 10-16-91

Depth, ft	Geologic Log	Material Description	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		COLLUVIUM Dry, reddish brown, silty, fine-grained sand (SM) with cobbles/ boulders					
		Boulder					
5							
10			60/ 3"				Refusal, no sample retained
		WEATHERED BEDROCK (TONALITE) Plutonic rock composed of quartz, feldspar, hornblende and biotite; foliated					
15							
20							
25							

Project: GREGORY CANYON							Log of Boring No.: B-3
Depth, ft	Geologic Log	Material Description	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		(Continued) plutonic rock composed of quartz, feldspar hornblende and biotite; foliated					Drilling harder at 30'
		Becomes wet					Encountered water at 33', boring sloughed 33' to 35'
35		Bottom of Boring at 35 feet Boring backfilled with 3/8-inch bentonite chips hydrated during placement					
40							
45							
50							
55							
60							

Project: GREGORY CANYON

Logged by: RKS | Checked by: LDR

Log of Test Boring No: B-4

Drilling Equipment: Canterra CT 212, Air Rotary, 6.5" Tricone

Ground Elev and Datum: Approximately 361', MSL

WL Depth ATD: None encountered

Date Started: 10-16-91 Date Completed: 10-16-91

Depth, ft	Geologic Log	Material Description	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		COLLUVIUM Very dense, dry, reddish brown, silty sand (SM) with cobbles/ boulders, micaceous					
		Boulders					
5							
10		With olive-gray mottling (with metamorphic clasts)	109			B4-10.5ft	
		Becomes pebbly					
15			50			B4-16ft	
		Boulder (decomposed; leucogranodiorite)					
		Boulder (metamorphic?); dark-colored cuttings					
20		Bottom of Boring at 19.5 feet Boring backfilled with 3/8-inch bentonite chips hydrated during placement.					
25							

Project No: 90532203-H400 | Woodward-Clyde Consultants | Figure: A-2.12

Project: GREGORY CANYON	Log of Test Boring No: B-5
Logged by: RKS Checked by: dan	

Drilling Equipment: Canterra CT 212, Air Rotary, 6.5" Tricone

Ground Elev and Datum: Approximately 378', MSL

GWL Depth ATD: None encountered

Date Started: 10-18-91 Date Completed: 10-18-91

Depth, ft	Geologic Log	Material Description	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		TOPSOIL Loose, dry to moist, dark reddish brown, silty, fine-grained sand (SM)	NR		RUN 1		60% recovery
		RESIDUAL SOIL Dense, moist, reddish brown, clayey sand (SC) with gravels and boulders					
5		**OLDER COLLUVIUM** Very dense, most, reddish brown, silty sand with clay (SM) and gravels	NR		RUN 2		85% recovery
		Fine gravels					
10		Very dense, moist, reddish brown, silty sand (SM), slightly cemented			RUN 3		100% recovery
		WEATHERED BEDROCK (TONALITE) Dark-colored, plutonic rock composed of quartz and feldspar with abundant biotite and hornblende					
15		Becomes moderately weathered	NR		RUN 4		80% recovery
20					RUN 5		100% recovery
		Becomes highly weathered, fractured and oxidized					
25		Bottom of Boring at 25 feet Boring backfilled with 3/8-inch bentonite chips hydrated during placement.					

Project No: 90532203-H400	Woodward-Clyde Consultants	Figure: A-2.13

Project: GREGORY CANYON

Logged by: RKS | Checked by: [illegible]

Log of Monitoring Well No: WCC-1 (B-6)

Drilling Equipment: Canterra CT 212, Air Rotary, 6.5" Tricone

Ground Elev and Datum: Approximately 328', MSL

WL Depth ATD: 20 feet

Date Started: 10-18-91 Date Completed: 10-19-91

WL Elev: 309.48' Date: 10-17-91 Time: 10:30 am

TOC Elev: 330.38' Well Cover: Monument

Well Casing: 2" diam., Sch 40 PVC Screen: 0.020" slotted

Filter Pack: #2/16 Lonestar sand Seal: No. 8 Granular Bentonite (Enviroplug)

Depth, ft	Geologic Log	Material Description	Well Details	Blow Counts	OVM/OVA (ppm)	Sample Type	Sample No.	Notes
		ALLUVIUM Loose, dry, brown, silty sand (SM) with gravel		NR		RUN 1		0% retained
5		**COLLUVIUM** Moist, reddish orange brown, fine- to medium-grained, silty sand (SM) with gravel and boulders Leucogranodiorite boulder		NR		RUN 2		30% retained
				NR			RUN 3	75% retained
10							RUN 4	
				NR		RUN 5		50% retained
15				NR			RUN 6	50% retained
		Boulder Gravel Boulder		NR		RUN 7		75% retained
20		Wet, orange brown, clayey, medium-grained sand (SC) with gravel		NR		RUN 8		80% retained
25				NR		RUN 9		60% retained
		Bottom of Boring at 30 feet						

Project No: 90532203-H400 | Woodward-Clyde Consultants | Figure: A-2.14

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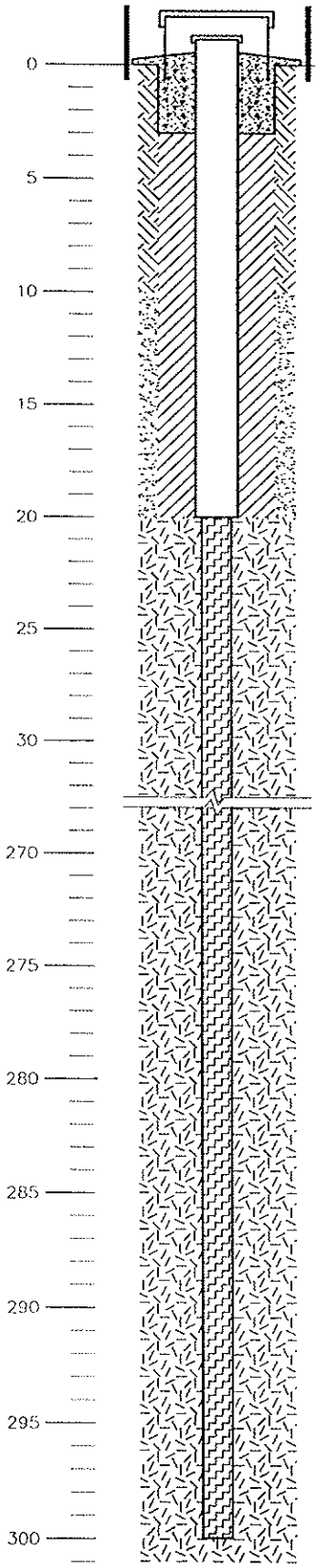
MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-1**

PAGE: 1 OF 1

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 342.5 feet
ELEVATION TOP OF CASING: 343.72 feet
DATE STARTED: 11/19/96
DATE FINISHED: 11/20/96
TOTAL DEPTH: 300 feet



DRILLING SUMMARY:

Total Depth: 300 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +1.22 to 20 feet.)

Screen: NONE – OPEN HOLE. (From 20 to 300 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 20 feet.)

Filter Pack: NONE – FRACTURED ROCK.

Residual Soil. (From 0 to 10 feet.)

DECOMPOSED ROCK. (From 10 to 20 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/19/96	10:12	11/20/96	9:07
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/13/96	–	12/13/96	–
Casing Install:	11/19/96	10:36	11/19/96	12:14
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/20	6:30	99.5'	1.5'	234'	235.5'	TSR
12/16	–	37.1'	1.5'	296.4'	297.9'	LL

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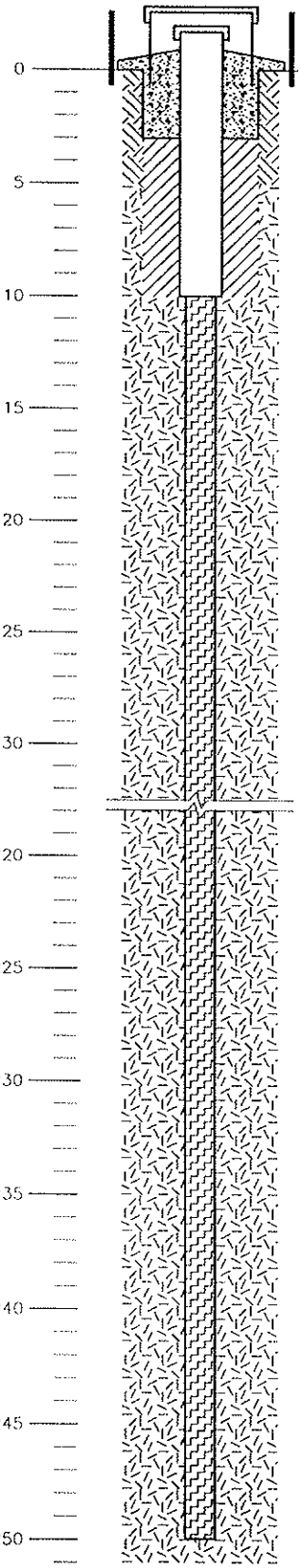
MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-2**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 377.1 feet
ELEVATION TOP OF CASING: 379.45 feet
DATE STARTED: 11/18/96
DATE FINISHED: 11/19/96
TOTAL DEPTH: 250 feet



DRILLING SUMMARY:

Total Depth: 250 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/18/96	11:20	11/19/96	8:19
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/12/96	–	12/12/96	–
Casing Install:	11/18/96	11:50	11/18/96	12:48
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +2.35 to 10 feet.)

Screen: NONE – OPEN HOLE. (From 10 to 250 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 10 feet.)

Filter Pack: NONE – FRACTURED ROCK.

Residual Soil. (From 0 to 5 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/19	6:40	127.5'	1.5'	126'	247.5'	TSR
11/19	15:05	105'	1.5'	103.5'	270'	TSR
11/20	10:03	73.8'	1.5'	72.3'	301.2'	TSR
12/16	–	69.73'	1.5'	68.23'	305.27'	LL

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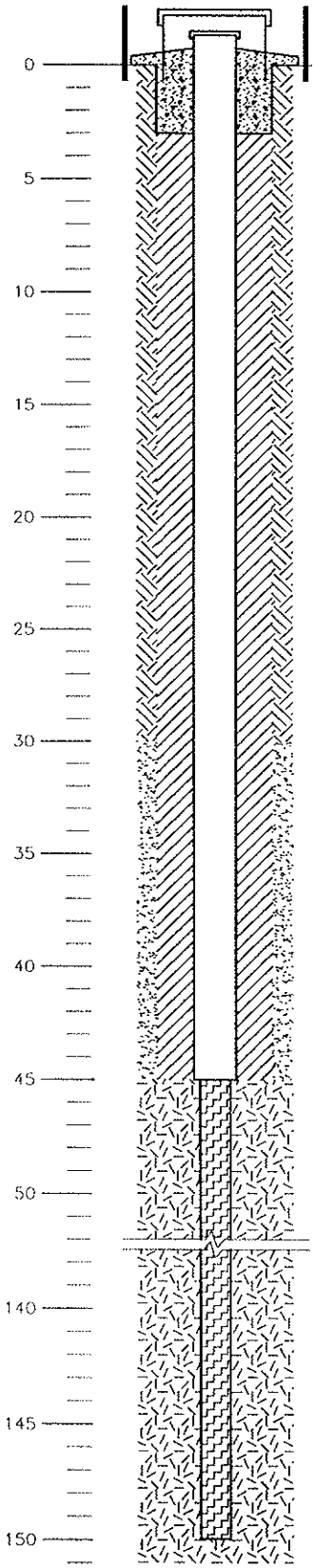
MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-3**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 330.6 feet
ELEVATION TOP OF CASING: 332.02 feet
DATE STARTED: 11/25/96
DATE FINISHED: 11/26/96
TOTAL DEPTH: 150 feet



DRILLING SUMMARY:

Total Depth: 150 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +1.42 to 45 feet.)

Screen: NONE – OPEN HOLE. (From 45 to 150 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 45 feet.)

Filter Pack: NONE – FRACTURED ROCK.

ALLUVIUM/COLLUVIUM. (From 0 to 30 feet.)

DECOMPOSED ROCK. (From 30 to 45 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/25/96	12:15	11/26/96	7:31
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/14/96	–	12/14/96	–
Casing Install:	11/25/96	12:45	11/25/96	15:33
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/26	6:45	21'	1.5'	19.5'	309'	TSR
12/16	–	23.84'	1.5'	22.34'	306.16'	LL

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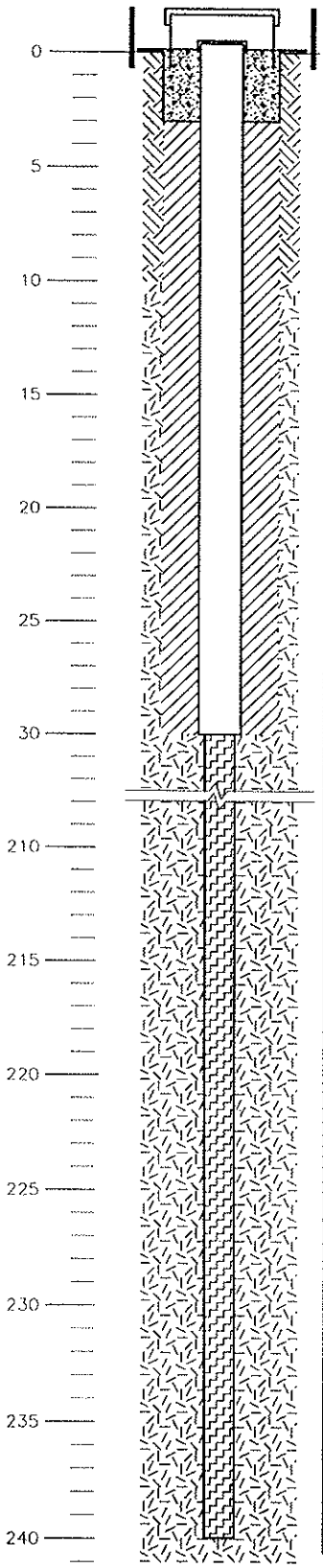
MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-4**

PAGE: 1 OF 1

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: T. REEDER/M. VINCENT
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 904.9 feet
ELEVATION TOP OF CASING: 904.99 feet
DATE STARTED: 11/26/96
DATE FINISHED: 11/27/96
TOTAL DEPTH: 240 feet



DRILLING SUMMARY:

Total Depth: 240 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +0.09 to 30 feet.)

Screen: NONE – OPEN HOLE. (From 30 to 240 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 30 feet.)

Filter Pack: NONE – FRACTURED ROCK.

Residual Soil. (From 0 to 10 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/26/96	–	11/27/96	11:08
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/17/96	–	12/17/96	–
Casing Install:	11/26/96	–	11/26/96	–
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
12/02	6:55	103.2'	1.5'	101.7'	801.8'	TSR
12/16	–	149.93'	1.5'	148.43'	755.07'	LL

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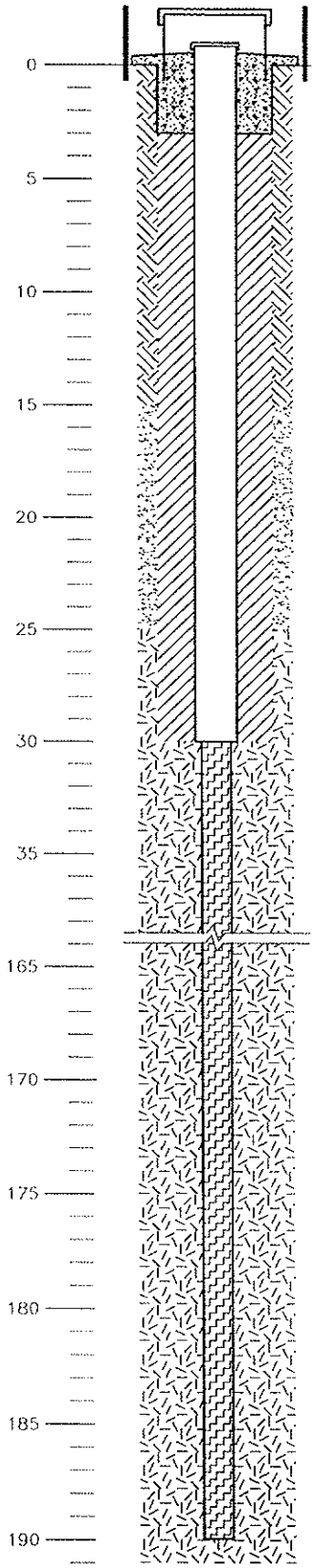
MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-5**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 927.1 feet
ELEVATION TOP OF CASING: 927.92 feet
DATE STARTED: 11/20/96
DATE FINISHED: 11/21/96
TOTAL DEPTH: 190 feet



DRILLING SUMMARY:

Total Depth: 190 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +0.82 to 30 feet.)

Screen: NONE – OPEN HOLE. (From 30 to 190 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 30 feet.)

Filter Pack: NONE – FRACTURED ROCK.

COLLUVIUM/Residual Soil. (From 0 to 15 feet.)

DECOMPOSED ROCK. (From 15 to 25 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/20/96	11:20	11/21/96	9:47
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/16/96	–	12/16/96	–
Casing Install:	11/20/96	–	11/20/96	15:57
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/21	6:30	41'	1.5'	39.5'	889'	TSR
12/16	–	42.57'	1.5'	41.07'	887.43'	LL

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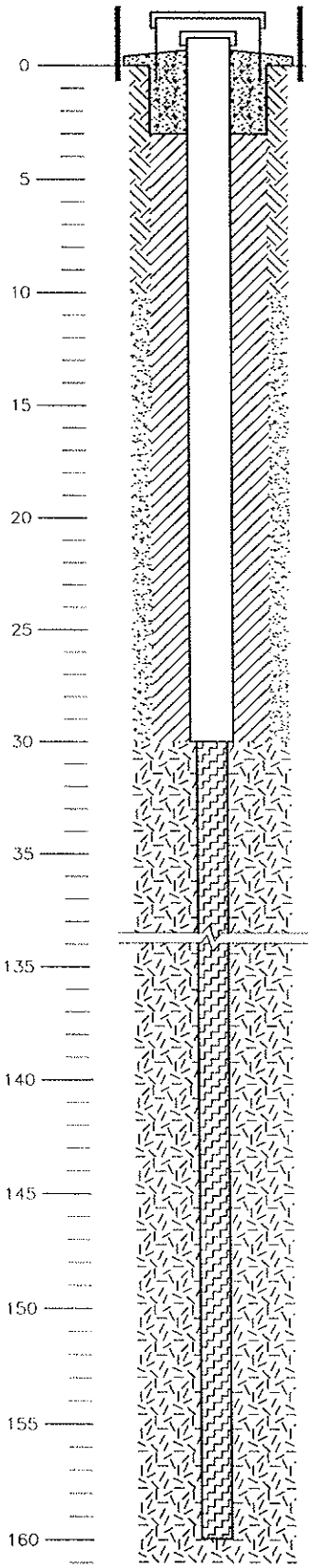
MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-7**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 401.6 feet
ELEVATION TOP OF CASING: 402.85 feet
DATE STARTED: 11/21/96
DATE FINISHED: 11/22/96
TOTAL DEPTH: 160 feet



DRILLING SUMMARY:

Total Depth: 160 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +1.25 to 30 feet.)

Screen: NONE – OPEN HOLE. (From 30 to 160 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 30 feet.)

Filter Pack: NONE – FRACTURED ROCK.

COLLUVIUM. (From 0 to 10 feet.)

DECOMPOSED ROCK. (From 10 to 30 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/21/96	13:55	11/22/96	10:21
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/19/96	–	12/19/96	–
Casing Install:	11/21/96	–	11/21/96	–
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
12/16	–	34.82'	1.5'	33.32'		TSR

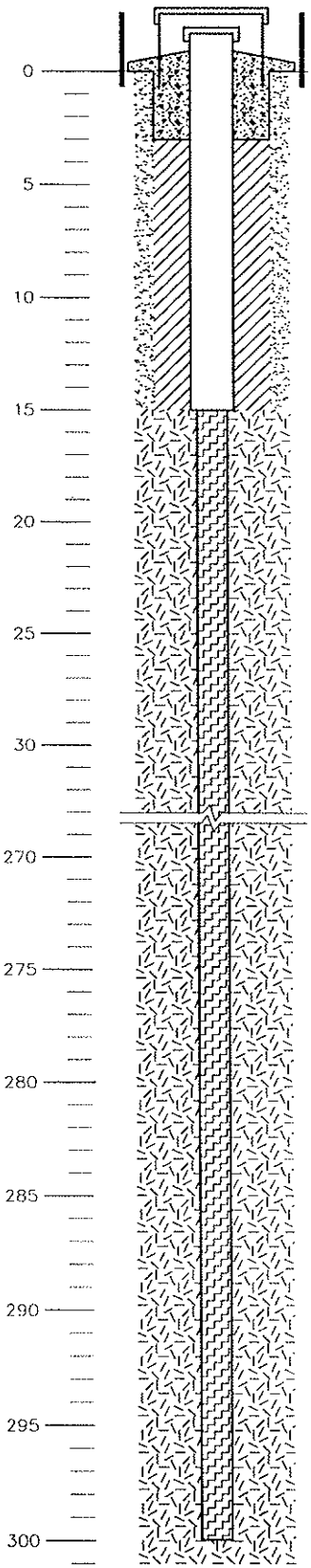
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-8**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: M. VINCENT/T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 632.7 feet
ELEVATION TOP OF CASING: 633.11 feet
DATE STARTED: 11/24/96
DATE FINISHED: 11/25/96
TOTAL DEPTH: 300 feet



DRILLING SUMMARY:

Total Depth: 300 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +1.41 to 15 feet.)

Screen: NONE – OPEN HOLE. (From 15 to 300 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 15 feet.)

Filter Pack: NONE – FRACTURED ROCK.

DECOMPOSED ROCK. (From 0 to 15 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/24/96	9:20	11/25/96	11:17
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/18/96	–	12/18/96	–
Casing Install:	11/24/96	–	11/24/96	–
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/25	6:45	61'	1.5'	59.5'	559'	TSR
12/16	–	62.40'	1.5'	60.9'	557.6'	LL

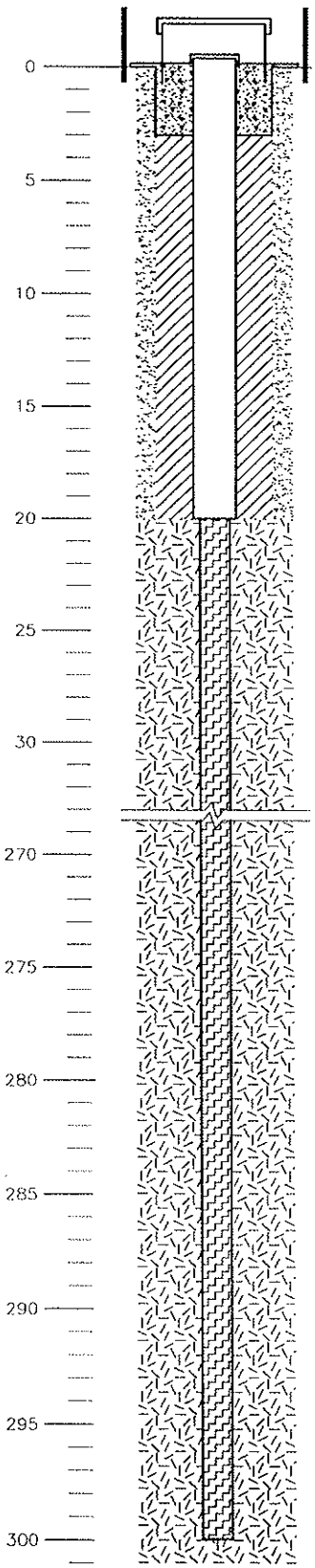
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-9**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: M. VINCENT/T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 615.4 feet
ELEVATION TOP OF CASING: 615.61 feet
DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
TOTAL DEPTH: 300 feet



DRILLING SUMMARY:

Total Depth: 300 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +0.21 to 20 feet.)

Screen: NONE – OPEN HOLE. (From 20 to 300 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 20 feet.)

Filter Pack: NONE – FRACTURED ROCK.

DECOMPOSED ROCK. (From 0 to 20 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	12/05/96	–	12/07/96	8:57
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	N/A	–	N/A	–
Casing Install:	–	–	–	–
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
12/07	8:57	DRY	1.5'	N/A	N/A	TSR
12/16	–	DRY	1.5'	N/A	N/A	LL

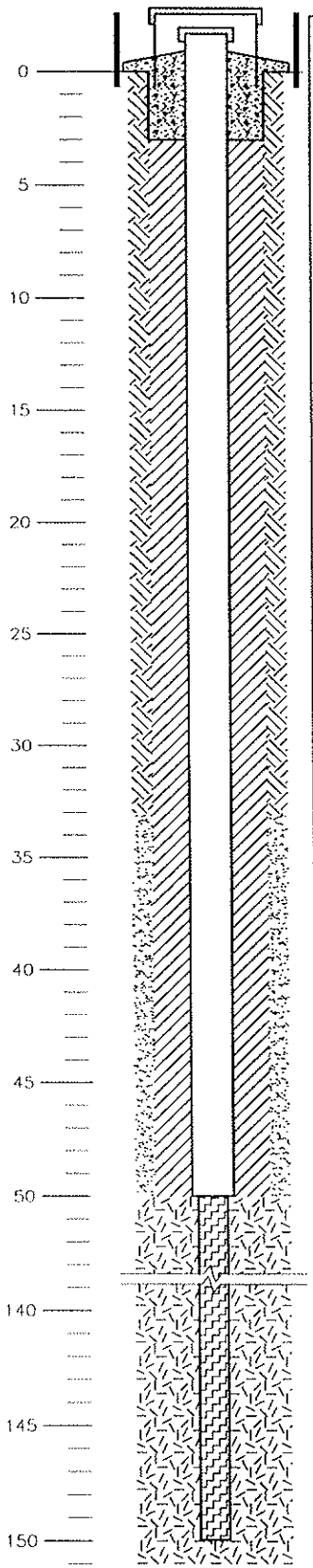
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-10**

JOB NO.: 9539
PROJECT: PROPOSED SAN DIEGO COUNTY LANDFILL
LOCATION: GREGORY CANYON, PALA AREA
INSPECTOR: M. VINCENT/T. REEDER
CHECKED BY: T. REEDER

ELEVATION GROUND LEVEL: 324.6 feet
ELEVATION TOP OF CASING: 326.59 feet
DATE STARTED: 12/03/96
DATE FINISHED: 12/05/96
TOTAL DEPTH: 150 feet



DRILLING SUMMARY:

Total Depth: 150 feet
Borehole diameter: 5.5 inches O.D.
Driller: Layne Cristensen

Rig: DUAL WALL REVERSE
Bit(s): CARBIDE BUTTON BIT

Drilling Fluid: Air

Protective Casing: N/A

WELL CONSTRUCTION DETAILS:

Casing: 6-inch diameter, flush threaded, Schedule 40 PVC (boring reamed to 8-inch diameter prior to placement of casing). (From +1.99 to 50 feet.)

Screen: NONE – OPEN HOLE. (From 50 to 150 feet.)

Bentonite Seal: Bentonite pellets. (From 3 to 50 feet.)

Filter Pack: NONE – FRACTURED ROCK.

COLLUVIUM. (From 0 to 33 feet.)

DECOMPOSED ROCK. (From 33 to 50 feet.)

Portland Type II cement with bentonite. (From 0 to 3 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	12/03/96	11:57	12/05/96	11:06
Coring:	–	–	–	–
Ream:	–	–	–	–
Geophys. Logging:	12/15/96	–	12/15/96	–
Casing Install:	12/03/96	–	12/03/96	–
Filter Placement:	–	–	–	–
Seal Placement:	–	–	–	–
Seal Placement 2nd:	–	–	–	–

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Bail			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
12/03	–	17'	2'	15'	308'	MV
12/16	–	22.2'	2'	20.2'	300.8'	LL

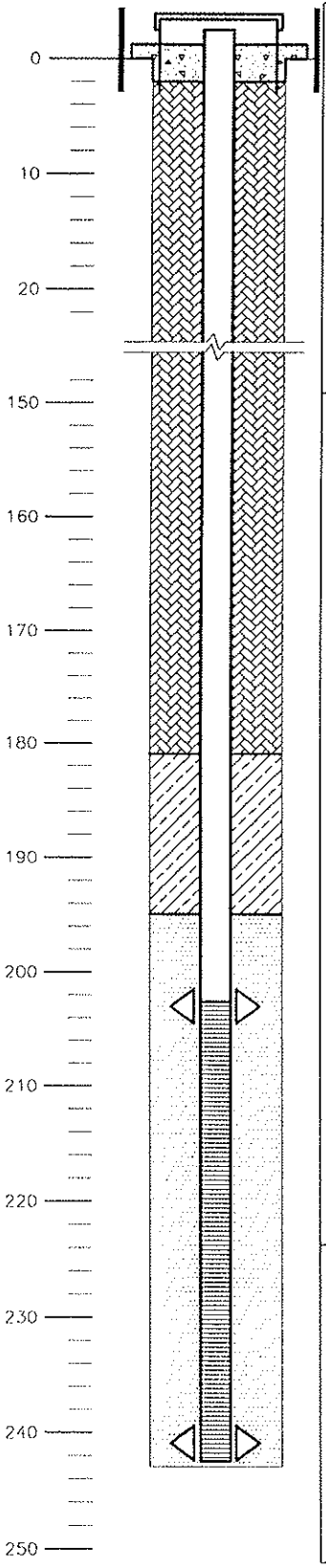
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-11**

JOB NO.: 9539
PROJECT: DETECTION MONITORING PROGRAM
LOCATION: GREGORY CANYON LANDFILL
INSPECTOR: W. LOPEZ, CEG
CHECKED BY: S. BATTELLE, CHG

ELEVATION GROUND LEVEL: 775.22
ELEVATION TOP OF CASING: 777.32
DATE STARTED: 11/30/99
DATE FINISHED: 12/02/99
TOTAL DEPTH: 242.5 feet



DRILLING SUMMARY:

Total Depth: 243 feet
Borehole diameter: 6.5"

Driller: Water Development Corporation
Rig: Dresser T-70
Bit(s): Downhole Hammer

Drilling Fluid: Air

Protective Casing: None

WELL CONSTRUCTION DETAILS:

Casing: 2" diameter Sch. 40 PVC with flush threaded joints. (From +2.1 to 202.5 feet.)

Screen: 2" diameter Sch. 40 PVC with 0.020" slots and flush threaded joints. (From 202.5 to 242.5 feet.)

Grout Seal: Portland type I-II neat cement with 5% bentonite. (From 2 to 181.0 feet.)

Bentonite Seal: Medium bentonite chips. (From 181.0 to 195.0 feet.)

Filter Pack: #3 Monterey Sand. (From 195 to 243 feet.)

Centralizer: Stainless steel. (At 202 and 242 feet.)

Concrete

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/30/99	8:20	11/30/99	15:27
Coring:	-	-	-	-
Casing Install:	12/1/99	16:00	12/1/99	16:33
Filter Placement:	12/1/99	16:37	12/1/99	16:44
Seal Placement: (Bentonite Chips)	12/1/99	16:44	12/1/99	16:58
Seal Placement 2nd: (Grout)	12/2/99	10:41	12/2/99	11:10

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	12/7/99	11:10	11:50
Air Lift Pumping			
Other - Bailer	12/7/99	11:50	16:30

Total Gallons Removed: 75

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/30/99	16:30			231' bgs		WBL
12/07/99	11:10			191.5' bgs		WBL

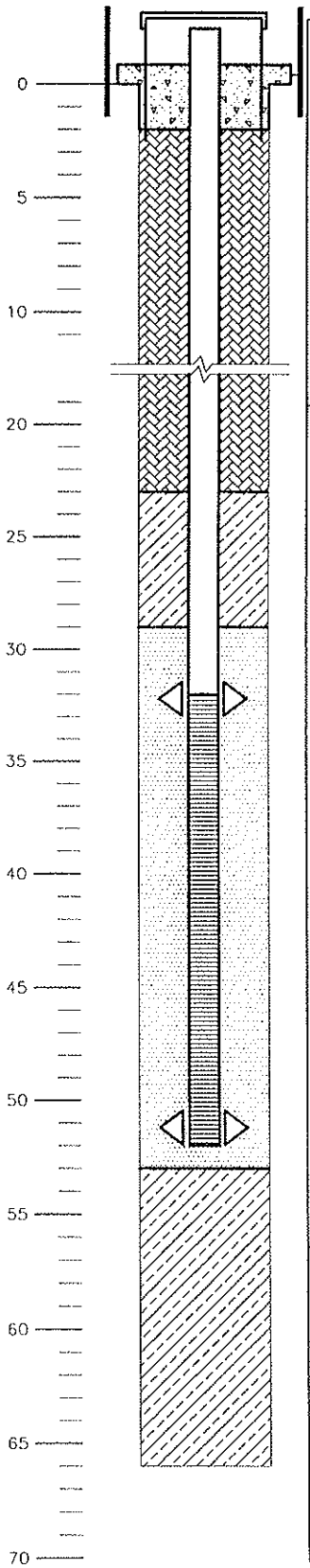
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-12**

JOB NO.: 9539
PROJECT: DETECTION MONITORING PROGRAM
LOCATION: GREGORY CANYON LANDFILL
INSPECTOR: W. LOPEZ, CEG
CHECKED BY: S. BATTELLE, CHG

ELEVATION GROUND LEVEL: 343.91
ELEVATION TOP OF CASING: 345.79
DATE STARTED: 11/24/99
DATE FINISHED: 11/24/99
TOTAL DEPTH: 52 feet



DRILLING SUMMARY:

Total Depth: 66 feet
Borehole diameter: 6-5/8"

Driller: Water Development Corporation
Rig: Dresser T-70
Bit(s): Tri-cone/Downhole Hammer

Drilling Fluid: Air

Protective Casing: 9-7/8" ø steel.

WELL CONSTRUCTION DETAILS:

Casing: 2" diameter Sch. 40 PVC with flush threaded joints. (From +1.88 to 32 feet.)

Screen: 2" diameter Sch. 40 PVC with 0.020" slots and flush threaded joints. (From 32 to 52 feet.)

Grout Seal: Portland type I-II neat cement with 5% bentonite. (From 2 to 23 feet.)

Bentonite Seal: Medium bentonite chips. (From 23 to 29 feet and from 53 to 66 feet.)

Filter Pack: #3 Monterey Sand. (From 29 to 53 feet.)

Centralizer: Stainless steel. (At 32 and 52 feet.)

Concrete

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	-	-	-	-
Coring:	-	-	-	-
Casing install:	11/24/99	15:03	11/24/99	15:09
Filter Placement:	11/24/99	15:10	11/24/99	15:15
Seal Placement: (Bentonite Chips)	11/24/99	14:58 15:15	11/24/99	15:03 15:16
Seal Placement 2nd: (Grout)	11/24/99	15:35	11/24/99	15:40

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	12/7/99	7:20	8:05
Air Lift Pumping			
Other - Bailer	12/7/99	8:05	10:30

Total Gallons Removed: 40

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/24/99	13:00			36.7' bgs		WBL
12/07/99	7:20			35.1' bgs		WBL

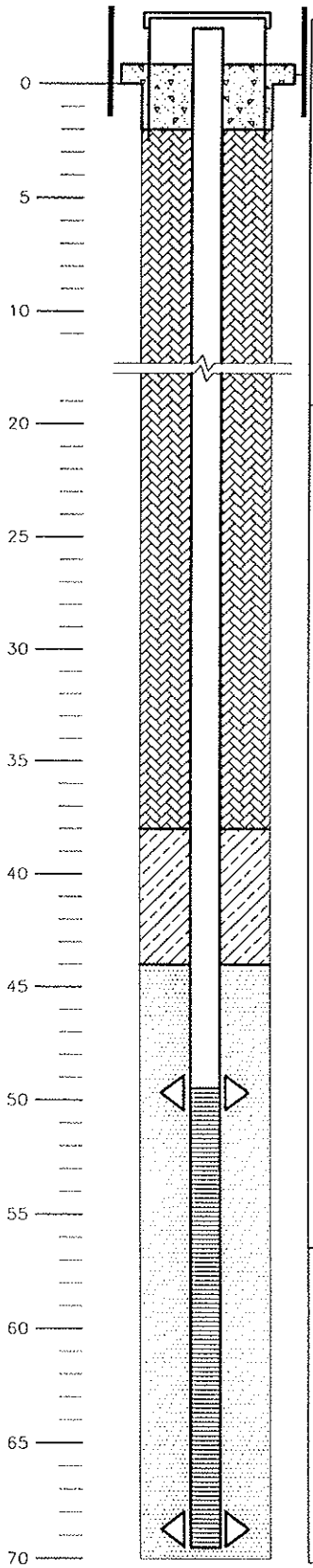
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-13**

JOB NO.: 9539
PROJECT: DETECTION MONITORING PROGRAM
LOCATION: GREGORY CANYON LANDFILL
INSPECTOR: W. LOPEZ, CEG
CHECKED BY: S. BATTELLE, CHG

ELEVATION GROUND LEVEL: 355.90
ELEVATION TOP OF CASING: 358.15
DATE STARTED: 11/22/99
DATE FINISHED: 11/23/99
TOTAL DEPTH: 69.5 feet



DRILLING SUMMARY:

Total Depth: 70 feet
Borehole diameter: 6.5"

Driller: Water Development Corporation
Rig: Dresser T-70
Bit(s): Tri-cone

Drilling Fluid: Air

Protective Casing: 9-7/8" ø steel.

WELL CONSTRUCTION DETAILS:

Casing: 2" diameter Sch. 40 PVC with flush threaded joints. (From +2.25 to 49.5 feet.)

Screen: 2" diameter Sch. 40 PVC with 0.020" slots and flush threaded joints. (From 49.5 to 69.5 feet.)

Grout Seal: Portland type I-II neat cement with 5% bentonite. (From 2 to 38 feet.)

Bentonite Seal: Medium bentonite chips. (From 38 to 44 feet.)

Filter Pack: #3 Monterey Sand. (From 44 to 70 feet.)

Centralizer: Stainless steel. (At 49 and 69 feet.)

Concrete

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/22/99	15:00	11/23/99	8:22
Coring:	-	-	-	-
Casing Install:	11/23/99	10:26	11/23/99	10:35
Filter Placement:	11/23/99	10:35	11/23/99	10:39
Seal Placement: (Bentonite Chips)	11/23/99	10:40	11/23/99	10:42
Seal Placement 2nd: (Grout)	11/23/99	10:57	11/23/99	11:13

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	12/6/99	14:00	14:45
Air Lift Pumping			
Other - Bailer	12/6/99	14:45	16:30

Total Gallons Removed: 45

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/23/99	7:00			49.7' bgs		WBL
12/06/99	14:18			47.0' bgs		WBL

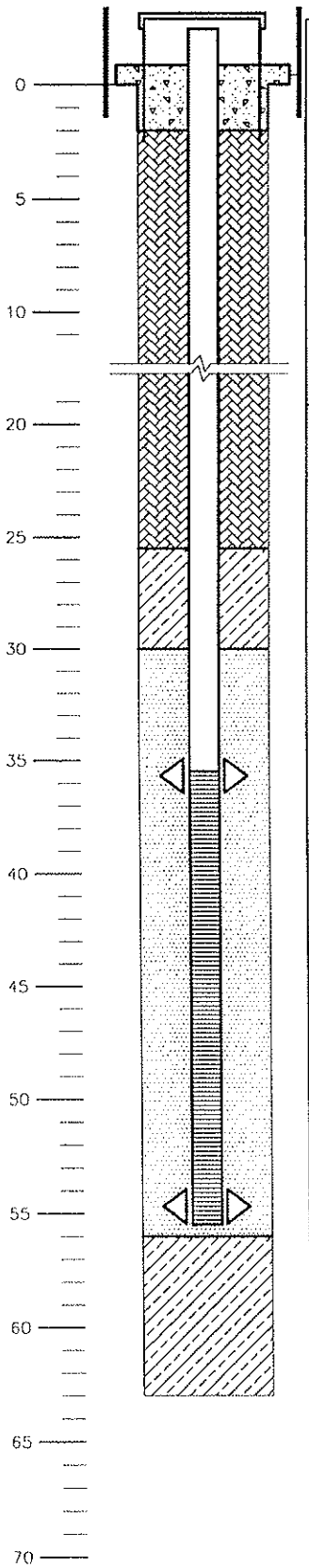
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-14**

JOB NO.: 9539
PROJECT: DETECTION MONITORING PROGRAM
LOCATION: GREGORY CANYON LANDFILL
INSPECTOR: W. LOPEZ, CEG
CHECKED BY: S. BATTELLE, CHG

ELEVATION GROUND LEVEL: 332.21
ELEVATION TOP OF CASING: 334.13
DATE STARTED: 11/21/99
DATE FINISHED: 11/22/99
TOTAL DEPTH: 55.5 feet



DRILLING SUMMARY:

Total Depth: 63 feet
Borehole diameter: 9-7/8"

Driller: Water Development Corporation
Rig: Dresser T-70
Bit(s): Tri-cone

Drilling Fluid: Air

Protective Casing: 9-7/8" ø steel.

WELL CONSTRUCTION DETAILS:

Casing: 2" diameter Sch. 40 PVC with flush threaded joints. (From +1.92 to 35.5 feet.)

Screen: 2" diameter Sch. 40 PVC with 0.020" slots and flush threaded joints. (From 35.5 to 55.5 feet.)

Grout Seal: Portland type I-II neat cement with 5% bentonite. (From 2 to 25.5 feet.)

Bentonite Seal: Medium bentonite chips. (From 25.5 to 30 feet and from 56 to 63 feet.)

Filter Pack: #3 Monterey Sand. (From 30 to 56 feet.)

Centralizer: Stainless steel. (At 35 and 55 feet.)

Concrete

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/21/99	7:35	11/21/99	16:15
Coring:	-	-	-	-
Casing Install:	11/22/99	8:23	11/22/99	8:28
Filter Placement:	11/22/99	8:30	11/22/99	8:36
Seal Placement: (Bentonite Chips)	11/22/99	7:52 8:38	11/22/99	7:54 8:40
Seal Placement 2nd: (Grout)	11/22/99	9:05	11/22/99	9:15

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	12/6/99	9:35	10:20
Air Lift Pumping			
Other - Bailer	12/6/99	10:20	12:35

Total Gallons Removed: 45

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/22/99	7:00			36.5' bgs		WBL
12/06/99	9:20			36.5' bgs		WBL

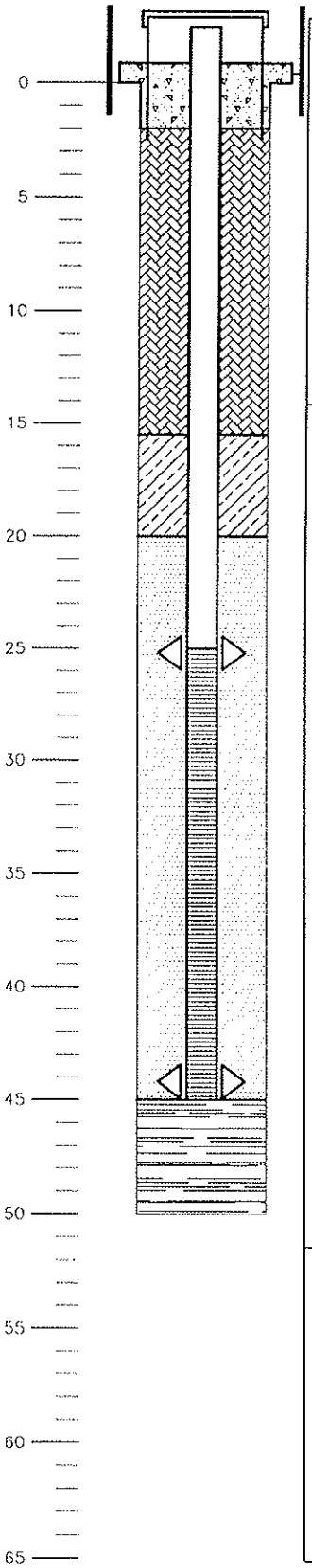
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-15**

JOB NO.: 9539
PROJECT: DETECTION MONITORING PROGRAM
LOCATION: GREGORY CANYON LANDFILL
INSPECTOR: W. LOPEZ, CEG
CHECKED BY: S. BATTELLE, CHG

ELEVATION GROUND LEVEL: 304.82
ELEVATION TOP OF CASING: 306.80
DATE STARTED: 11/19/99
DATE FINISHED: 11/20/99
TOTAL DEPTH: 45 feet



DRILLING SUMMARY:

Total Depth: 50 feet
Borehole diameter: 9-7/8"

Driller: Water Development Corporation
Rig: Dresser T-70
Bit(s): Tri-cone

Drilling Fluid: Air

Protective Casing: 9-7/8" ø steel.

WELL CONSTRUCTION DETAILS:

Casing: 2" diameter Sch. 40 PVC with flush threaded joints. (From +1.98 to 25 feet.)

Screen: 2" diameter Sch. 40 PVC with 0.020" slots and flush threaded joints. (From 25 to 45 feet.)

Grout Seal: Portland type I-II neat cement with 5% bentonite. (From 2 to 15.5 feet.)

Bentonite Seal: Medium bentonite chips. (From 15.5 to 20 feet.)

Filter Pack: #3 Monterey Sand. (From 20 to 45 feet.)

Centralizer: Stainless steel. (At 25 and 45 feet.)

Concrete

Slough

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	11/19/99	13:10	11/19/99	17:10
Coring:	-	-	-	-
Casing Install:	11/20/99	8:30	11/20/99	8:37
Filter Placement:	11/20/99	8:40	11/20/99	13:00
Seal Placement: (Bentonite Chips)	11/20/99	13:08	11/20/99	13:12
Seal Placement 2nd: (Grout)	11/20/99	14:45	11/20/99	15:20

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Air Lift Pumping			
Other -			

Total Gallons Removed:

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
11/20/99	7:00			25.0' bgs		WBL
11/21/99	8:30			11.7' bgs		WBL
12/08/99	8:50			12.3' bgs		WBL

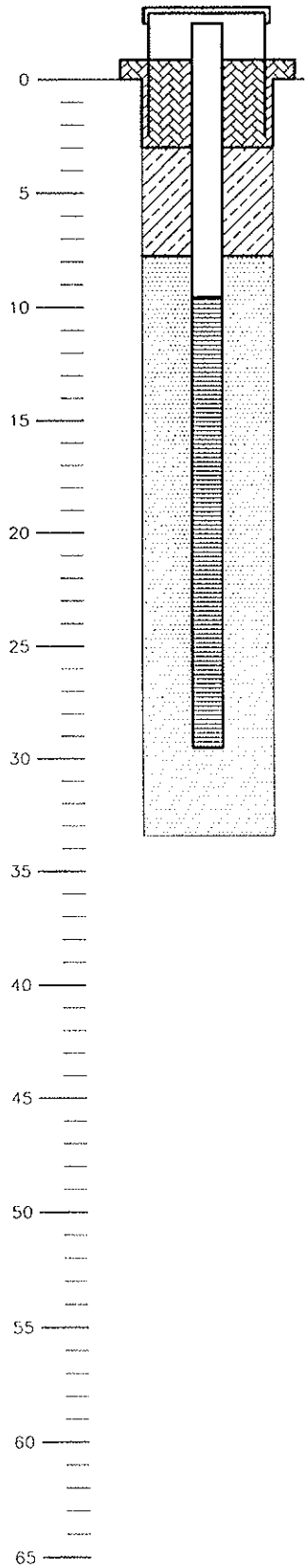
GeoLogic Associates

MONITORING WELL COMPLETION SUMMARY

WELL NO.: **GLA-16**

JOB NO.: 9539
PROJECT: DETECTION MONITORING PROGRAM
LOCATION: GREGORY CANYON LANDFILL
INSPECTOR: W. LOPEZ, CEG
CHECKED BY: S. BATTELLE, CHG

ELEVATION GROUND LEVEL: 305.28
ELEVATION TOP OF CASING: 307.54
DATE STARTED: 12/20/99
DATE FINISHED: 12/20/99
TOTAL DEPTH: 29.5 feet



DRILLING SUMMARY:

Total Depth: 33.5 feet
Borehole diameter: 8"

Driller: Water Development Corporation
Rig: CME-95
Bit(s): Hollow Stem Auger

Drilling Fluid: Air

Protective Casing: Hollow Stem Auger

WELL CONSTRUCTION DETAILS:

Casing: 2" diameter Sch. 40 PVC with flush threaded joints. (From +2.26 to 9.5 feet.)

Screen: 2" diameter Sch. 40 PVC with 0.020" slots and flush threaded joints. (From 9.5 to 29.5 feet.)

Grout Seal: Readi-mix concrete. (From 0 to 3 feet.)

Bentonite Seal: Medium bentonite chips. (From 3 to 7.8 feet.)

Filter Pack: #3 Monterey Sand. (From 7.8 to 33.5 feet.)

WELL CONSTRUCTION LOG:

	Start Date	Start Time	Finish Date	Finish Time
Drilling:	12/20/99	10:00	12/20/99	10:15
Coring:	-	-	-	-
Casing Install:	12/20/99	10:15	12/20/99	10:30
Filter Placement:	12/20/99	10:30	12/20/99	10:55
Seal Placement: (Bentonite Chips)	12/20/99	10:55	12/20/99	11:05
Seal Placement 2nd: (Grout)	12/20/99	11:15	12/20/99	11:30

WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	12/23/99	11:40	12:10
Air Lift Pumping			
Other - Bailer	12/23/99	12:10	14:00

Total Gallons Removed: 65

STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond.	Temp (°F)

Comments:

WELL MONITORING DATA:

Date	Time	Reading	Corr.	Depth	SWL	By
12/20/99	11:10			10.6' bgs		WBL

GeoLogic Associates

BORING LOG

BORING NO.: GLA-1

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/19/96
DATE FINISHED: 11/20/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 99.5 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/19 10:12						0–5–10			SP GP	RESIDUAL SOIL mixed with decomposed rock. Yellowish brown (10R5/4). Drills as a coarse SAND. Moderately to highly weathered. Dominant lithic fragments are decomposed LEUCOGRANODIORITE with iron oxide staining.	Dry.
						10–15				Decomposed GRANODIORITE with quartz. Light brownish gray (2.5Y6/2) to brown (10YR5/3). Oxidized with altered biotite and some pink (7.5YR7/4) potassium-feldspar. Cut by quartz feldspar dikes.	Damp.
						15–20–25–30–35–40	12/16/96			BONSALL TONALITE. Gray (2.5Y5/1). Drills as a fine to medium sand with some coarse fragments. Highly to moderately weathered; some iron oxide staining; altered micas. ...(20') – slightly less weathered (moderately weathered) and more felsic. ...(30') – TONALITE drills as a fine sand with minor coarse sand – fine gravel size fragments. Color changes to gray (2.5Y6/1).	Damp.
12:14	10:36					45				GRANODIORITE/TONALITE lithic fragments. Slightly weathered and oxidized. Gray (N6); many fragments display foliation; rare pinkish white (5YR8/2) potassium feldspar, probably as dikes.	
		1.17				50–55				GRANODIORITE. Increase in felsic lithic fragments. Gray (10YR6/4) to light gray (10YR7/1). More quartz and feldspar dikes; foliation is less common. Iron oxide staining on quartz and feldspar.	
12:35	12:31					60				GRANODIORITE/TONALITE. Less felsic fragments. Color change to gray (5Y5/1 to N5); with very minor pinkish white to reddish yellow (5YR8/2 to 7.5YR7/6) potassium feldspar; very minor iron oxide staining.	

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates

BORING LOG

BORING NO.: GLA-1

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/19/96
DATE FINISHED: 11/20/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 99.5 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
12:35						60				GRANODIORITE/TONALITE. Less felsic fragments. Color change to gray (5Y5/1 to N5); with very minor pinkish white to reddish yellow (5YR8/2 to 7.5YR7/6) potassium feldspar; very minor iron oxide staining.	
						65				TONALITE. Gray (N6). Slightly weathered. Mineralogy is hornblende, pyroxene, feldspar (plagioclase), and minor quartz.	
						70				...(70') – slightly darker; less potassium feldspar.	
						75					
12:59	12:57	0.91				80					...(80') – dry.
						85					
		0.91				90					
						95				...(95') – mixed TONALITE and GRANODIORITE. Darker gray (N5) and light gray (N7) (TONALITE inclusions in GRANODIORITE?).	
13:24	13:21					100					
						105					
		1.05				110				...(110') – less segregated GRANODIORITE/TONALITE.	
						115				...(115') – slightly more felsic lithic fragments. GRANODIORITE/TONALITE with slightly oxidized quartz/feldspar dikes.	
13:46	13:43					120				...(120') – More uniform appearance. Felsic fragments absent – no dikes.	

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates

BORING LOG

BORING NO.: GLA-1

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/19/96
DATE FINISHED: 11/20/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 99.5 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
13:46						120				...(120') - More uniform appearance. Felsic fragments absent - no dikes.	
						125				...(125') - same as above. GRANODIORITE/ TONALITE. Gray (N5). Slight foliation on some fragments.	Dry.
		0.91				130				GRANODIORITE/TONALITE. Gray (N5).	
						135					
14:12	14:08					140					
						145					
						150					
						155					
14:37	14:33	0.95				160				...(160') - slightly more felsic fragments, possibly dikes in the TONALITE.	
						165				...(165') - less felsic fragments; more mafics.	
						170					
						175					
15:25	14:56	1.05				180					

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-1

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/19/96
DATE FINISHED: 11/20/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 99.5 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
15:25						180					
						185					
						190				...(190') – some very minor iron oxide staining along fractured surfaces.	
						195				GRANODIORITE/TONALITE. Gray (N5). Slightly weathered to fresh.	
15:50	15:47	0.91				200					
						205				...(205') – increase in felsic minerals (quartz and feldspar); probably GRANODIORITE dikes in the TONALITE. White (N8) felsic fragments represent approximately 35-40% of material.	
						210	▽				...(210') – dampness on outside of drill stem.
						215				...(215') – felsic fragments increase to 50%.	
16:12	16:09	1.05				220				LEUCOGRANODIORITE. White (N8 to 10YR8/1) with minor inclusions of TONALITE. Slightly weathered; minor iron oxide staining; with pinkish white (5YR8/2) potassium feldspar.	
						225				GRANODIORITE/TONALITE with felsic dikes. Gray (N5) TONALITE with approximately 30% LEUCOGRANODIORITE dikes.	...(223') – damp.
						230				...(230') – 5% felsic fragments.	
						235				...(235') – felsic fragments increase to 40%. LEUCOGRANODIORITE dikes in TONALITE. Light gray (N6). Slightly oxidized.	
11/20 7:35	16:30	1.11				240				...(240') – felsic fragments represent approximately 50% of the material (QUARTZ GRANODIORITE?).	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-1

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/19/96
DATE FINISHED: 11/20/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 99.5 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/20 7:35						240				...(240') - felsic fragments represent approximately 50% of the material (QUARTZ GRANODIORITE?).	
						245				...(245') - felsic fragments less than 5% (GRANODIORITE with 30%+ quartz and feldspar). Light gray (N6); with pink (5Y7/4) potassium feldspar; some epidote and chlorite alteration.	Wet.
7:41	7:47	0.83				250				...(250') - no pink potassium feldspar. Increase in GRANODIORITE/TONALITE fragments foliation.	
						255				...(255') - darker. TONALITE with little felsic fragments. Gray (N5). Very minor quartz/ feldspar dikes.	Dry.
8:08	7:59	0.56				260				TONALITE. Dark gray (N5). Hard; minor foliation of mafic minerals.	
						265					...(265') - enough water flowing into the hole to wet sample when adding rod.
8:17	8:16	1.25				270				...(270') - Migmatitic texture on some fragments. GRANODIORITE/TONALITE with minor epidote and chlorite alteration. Slightly more felsic than above.	
						275					
8:42	8:29	0.83				280					
						285				...(285') - white zeolite coating on fracture surface on one lithic fragment. Very minor iron oxide staining on some fragments. Minor chlorite and epidote alteration.	Damp.
	8:53	0.91				290				...(290') - very minor pinkish white (5Y8/2) potassium feldspar. ...(295') - no visible potassium feldspar (5YR8/2).	
						295					
	9:07					300					

NOTES:
1. Total depth of borehole 300 feet.
2. Conductor casing set to 20 feet.
3. Open hole interval (exposed bedrock) between 20 and 300 feet below ground surface.
4. Groundwater first encountered between 200 and 220 feet.
5. Depth to water on 12/16/96 measured at 37.10 feet.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-2

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/18/96
DATE FINISHED: 11/19/96
ELEVATION: 375 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 70 feet
TOTAL DEPTH: 250 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/18 11:20						0			SM	RESIDUAL SOIL. Loose, non-cohesive, with coarse SAND to fine GRAVEL-sized rock fragments. Yellowish-brown (10YR5/4).	Dry.
						5				BONSALL TONALITE. Strongly weathered (probably "C" horizon). Brown (10YR5/3). Drills as a fine silty sand.	Damp.
						10				...(10') - becomes coarser with fine sand to medium gravel-sized fragments; coarser fragments are dominantly composed of quartz and feldspar (probably derived from a LEUCOGRANODIORITE dike).	
		0.67				15					
11:42	11:50					20				...(20') - slightly coarser.	Drier.
						25				GRANODIORITE. Gray (2.5Y5/1) to grayish brown (2.5Y5/2). Drills as a loose fine sand with minor coarse sand-size fragments of quartz and feldspar.	Dry.
12:26	12:05	0.87				30				LEUCOGRANODIORITE dike (?). Color changes to light gray (2.5Y7/1) to gray (2.5Y6/1). Drills as a very fine sand; minor coarse sand-size fragments; rare gravel-size fragments. Increase in felsic minerals (quartz and feldspar); decrease in mafics. ...(35'-40') - sample consists only of coarse fragments. Pale red (2.5YR7/2).	Dry. Drilling becomes more difficult from this depth on.
13:25	12:48					35					
						40				...(40') - LEUCOGRANODIORITE dike (?). Gray (2.5Y7/1). Very felsic.	Dry.
						45				...(45') - GRANODIORITE. Slightly darker, but still gray (2.5Y7/1).	
						50				...(50') - darker gray (2.5Y6/1. Increase in mafics (biotite).	Dry.
						55				...(55') - slightly darker gray (2.5Y6/1 to 2.5Y5/1). Drills as a very fine sand, with minor coarse sand and medium gravel fragments.	
13:40	13:37	1.67				60				...(60') - iron oxide staining on fragments (probably weathered fracture). Gray (7.5YR5/1).	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-2

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/18/96
DATE FINISHED: 11/19/96
ELEVATION: 375 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 70 feet
TOTAL DEPTH: 250 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
13:40						60				...(60') - iron oxide staining on fragments (probably weathered fracture). Gray (7.5YR5/1).	
						65				GRANODIORITE. Gray (7.5YR5/1). Moderately weathered with iron oxide staining, probably along fractures. Some GRANODIORITE fragments display foliation.	
							12/16/96				
						70				...(70') - less oxidation. GRANODIORITE/ TONALITE.	
						75					
14:02	13:58	1.11				80				...(80') - slightly weathered. Very little iron oxide staining. Color change to gray (N6 to N5) with some bluish gray (5B5/1).	
						85				...(85') - less weathered. No iron oxide staining.	
						90					
						95				...(95') - slightly less mafic. Pronounced foliation on many fragments.	
14:24	14:20	1.11				100					
						105					
						110					
						115					
14:44	14:41	1.18				120				GRANODIORITE. Gray (N5). Slightly weathered.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-2

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/18/96
DATE FINISHED: 11/19/96
ELEVATION: 375 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 70 feet
TOTAL DEPTH: 250 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
14:44						120				GRANODIORITE. Gray (N5). Slightly weathered.	
						125					
						130				GRANODIORITE with minor quartz feldspar dikes. Gray (N5). Slightly weathered.	
						135				...(135') - lighter color; gray (N6) to light gray (N7). Less mafics; more quartz and feldspar.	
15:02						140					...(140') - damp.
						145					
						150	▽				...(150') - moist.
						155					
15:36	15:25	0.87				160					...(160') - possibly moist; will let hole sit 15 minutes to see if water seeps into the hole.
						165					...(165') - wet.
						170					...(170') - drilling dry again; probably very low seepage into hole.
						175					
16:13	15:59	0.87				180					...(180') - moist; will let hole sit 15 minutes before putting in next stem. Refuel.

CONTINUED ON NEXT PAGE

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-2

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/18/96
DATE FINISHED: 11/19/96
ELEVATION: 375 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 70 feet
TOTAL DEPTH: 250 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
16:13						180				...same as above.	...(180') - moist; will let hole sit 15 minutes before putting in next stem. Refuel. ...(181') - wet. ...(185') - damp.
						185					
						190				TONALITE. Darker gray (N5 to N4), with white (N8) fragments mixed in composed of quartz and feldspar (probably derived from quartz/feldspar dikes in TONALITE).	
11/19 6:45						195				TONALITE. Gray (N5) to dark gray (N4), with white (N8) fragments of quartz/feldspar mixed in (<10%) (probably derived from quartz/feldspar dikes in TONALITE).	
6:54						200					
						205					
						210				...(210') - pink (5YR8/3) potassium feldspar fragments present in mix. Increase in felsic fragments up to 15-20% of material (TONALITE with feldspathic dikes). Some chlorite alteration of mafics.	
						215				...(215') - decrease in felsic fragments to approximately 5%. No obvious potassium-feldspar fragments.	
7:24	7:18	0.83				220					...(220') - still drilling damp. ...(223') - very minor water in hole when adding rod.
						225					
						230				...(230') - same as above.	Drilling drier to just slightly damp.
						235					...(235') - drilling wet again; driller thinks there is water pressure; material is clogging up cyclone.
8:04	7:50	0.77				240				TONALITE/DIORITE. Mafic fragments are dark gray to very dark gray (N4 to N3) when wet. Less than 3% felsic fragments.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-2

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/18/96
DATE FINISHED: 11/19/96
ELEVATION: 375 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 70 feet
TOTAL DEPTH: 250 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:04						240				TONALITE/DIORITE. Mafic fragments are dark gray to very dark gray (N4 to N3) when wet. Less than 3% felsic fragments.	
						245					
	8:19	0.67				250				...(250') - some epidote alteration of plagioclase; some chlorite alteration of mafics.	
						255				NOTES: 1. Total depth of borehole 250 feet. 2. Conductor casing set to 10 feet. 3. Open hole interval (exposed bedrock) between 10 and 250 feet below ground surface. 4. Groundwater first encountered at 150 feet. 5. Depth to water on 12/16/96 measured at 69.73 feet.	
						260					
						265					
						270					
						275					
						280					
						285					
						290					
						295					
						300					

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-3

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/25/96
DATE FINISHED: 11/26/96
ELEVATION: 330 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 21 feet
TOTAL DEPTH: 150 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/25 12:15						0			SM SP	TOPSOIL/COLLUVIUM: SILTY SAND with GRAVEL; sub-angular clasts of TONALITE and LEUCOGRANODIORITE; loose. Dark grayish brown (10YR4/3).	Moist.
						5			SW	ALLUVIUM: SAND, medium- to coarse-grained, minor fines, with fine- to coarse-grained angular gravel-size fragments of mostly LEUCOGRANODIORITE with some TONALITE. Brown (10YR5/3).	...(5') - damp.
						10			SW	SAND with minor fine- to coarse-grained GRAVEL. Light yellowish brown (2.5Y6/4) to very pale brown (2.5Y7/3).	...(10') - damp.
						15					
						20					
						25	12/16/96				
						30				DECOMPOSED LEUCOGRANODIORITE (GRUSS). Light olive brown (2.5Y5/6), highly weathered; Fe-oxide staining. Drills as a fine- to coarse-grained sand/silty sand; soft, loose.	...(30') - damp.
						35				DECOMPOSED LEUCOGRANODIORITE. Olive (5Y5/3) with Fe-oxide staining. Highly weathered and decomposed.	
						40				DECOMPOSED LEUCOGRANODIORITE. Light olive brown (2.5Y5/4). Drills as fine- to coarse-grained sand with minor gravel. Highly weathered and decomposed.	...(40') - damp.
						45				...(45') - color change to olive brown (2.5Y4/4).	
						50				DECOMPOSED LEUCOGRANODIORITE. Pale brown (10YR6/3) to yellowish brown (10YR5/4). Drills as loose, soft, medium- to coarse-grained sand. Potassium feldspar is reddish yellow (7.5YR6/6-6/8) with Fe-oxide staining.	...(50') - damp.
						55				...(60') - cuttings change in color to pale olive (5Y6/3); larger lithic fragments are gray (10YR6/1) to light brownish gray (10YR6/2); decrease in oxidation staining; color intensity of potassium feldspar decreases to pink (7.5YR8/3) to pinkish gray (7.5YR7/2).	
15:33	12:45	2				60					

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-3

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/25/96
DATE FINISHED: 11/26/96
ELEVATION: 330 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 21 feet
TOTAL DEPTH: 150 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
15:33						60				...(60') - cuttings change in color to pale olive (5Y6/3); larger lithic fragments are gray (10YR6/1) to light brownish gray (10YR6/2); decrease in oxidation staining; color intensity of potassium feldspar decreases to pink (7.5YR8/3) to pinkish gray (7.5YR7/2).	
						65				LEUCOGRANODIORITE. Weathered and decomposed. Cuttings are mixed yellow (10YR7/6) and grayish brown (10YR5/2) with minor reddish yellow (7.5YR7/6) potassium feldspar.	...(65') - groundwater first encountered. Moderately wet.
						70				...(70') - cuttings are light olive brown (2.5Y5/4).	...(70') - damp.
						75				...(75') - cuttings are olive brown (2.5Y4/3).	Hole produces water at a rate of about 15 gpm.
						80					
						85				...(85') - slightly darker, more mafic.	
						90				GRANODIORITE/TONALITE. Composed mostly of plagioclase, quartz and mafics. Slightly weathered. Dark greenish gray (5B4/1); larger lithic fragments are gray (N5); potassium feldspar is reddish yellow (7.5YR6/6). Less than 3% Fe-oxide staining on some quartz and feldspar dikes.	...(90') - moist.
						95					
16:03	16:01	1.43				100				TONALITE. Relatively unweathered. Gray (N5) with little Fe-oxide staining.	
						105					
						110					
						115					
11/26	16:31	0.71				120				...(120') - minor (less than 5%) potassium feldspar.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-3

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/25/96
DATE FINISHED: 11/26/96
ELEVATION: 330 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 21 feet
TOTAL DEPTH: 150 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/26						120				...(120') - minor (less than 5%) potassium feldspar.	
						125					
						130				TONALITE. Gray (N5). Slightly weathered with less than 1% feldspar. Minor quartz/feldspar dikes.	
						135					
7:25	7:19	1.67				140				...(140') - color change to dark gray (N4).	
						145					
	7:31					150					
						155					

Notes:

1. Total depth of borehole 150 feet.
2. Conductor casing set to 45 feet.
3. Open hole interval (exposed bedrock) between 45 and 150 feet below ground surface.
4. Groundwater first encountered at 65 feet.
5. Depth to water on 12/16/96 measured at 23.84 feet.

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates

BORING LOG

BORING NO.: GLA-4

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER / M. VINCENT, CEG

DATE STARTED: 11/26/96
DATE FINISHED: 11/27/96
ELEVATION: 905 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 103.2 feet
TOTAL DEPTH: 240 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/26						0			SM SC	TOPSOIL: SILTY SAND with CLAY to CLAYEY SAND. Reddish brown (5Y3/3) to dark brown (7.5YR3/3), soft, loose. Less than 6" thick.	Moist.
						5			SP	ALLUVIUM: Coarse SAND with fine GRAVEL and angular felsic clasts. Pale yellow (2.5Y7/4) to very pale brown (10YR7/4).	...(0.5') – damp.
						10				TONALITE: Moderately weathered with minor quartz/ feldspar dikes.	Damp.
						15				TONALITE with less than 30% of quartz/ feldspar dikes. Gray (N5).	
						20				...(20') – increase in felsic cuttings to 50%.	
						25				LEUCOGRANODIORITE DIKE. Yellow (10YR7/6) with Fe-oxide staining. Cuttings are approximately 40% TONALITE and 60% LEUCOGRANODIORITE.	Damp.
						30				LEUCOGRANODIORITE DIKE (30-35%) in TONALITE. Weathered potassium feldspar is pink (5Y7/4). Cuttings are somewhat oxidized.	
						35					
11/27 6:58						40				TONALITE. Greenish gray (5GY6/1), phaneritic with fine crystallinity and anhedral to subhedral crystals. Moderately weathered and hydrothermally altered. Hornblende and biotite phenocrysts show moderate chlorite-epidote hydrothermal alteration.	
						45					
						50				...(49') – color change to greenish gray (10BG6/1).	
						55				TONALITE. Bluish gray (10B5/1), phaneritic with fine crystallinity and anhedral to subhedral crystals; biotite- and hornblende-rich. Weak alteration to chlorite-epidote.	
7:27		~0.7				60				...(61') – slightly higher mafic mineral content than above.	

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GeoLogic Associates

BORING LOG

BORING NO.: **GLA-4**

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER / M. VINCENT, CEG

DATE STARTED: 11/26/96
DATE FINISHED: 11/27/96
ELEVATION: 905 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 103.2 feet
TOTAL DEPTH: 240 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
7:27						60				...(61') – Slightly higher content of biotite than above.	
						65				...(61'–65') – weak limonite staining on fracture surfaces. Slightly more chloritized biotite than above. ...(65') – weak foliation as evidenced by preferred orientation of biotite crystals.	
						70					...(70') – dry.
						75				...(72') – slightly more felsic than above, with slight increase in crystal size from fine– to medium–crystallinity feldspar and hornblende phenocrysts. ...(75') – same as above.	
7:51		~0.95				80				...(80') – same as above.	Dry.
						85				...(85') – same as above. ...(86'–92') – fracture zone with minor limonite and pyrolusite mineral coatings on fracture surfaces.	
8:03						90					...(90') – dry.
						95				...(94') – aplite dike(s) consisting mostly of potassium feldspar with minor quartz. ...(95'–100') – minor limonite staining visible on fracture surfaces.	
						100				...(100'–105') – no visible oxidation.	Dry.
8:50						105	▼				...(103.2') – groundwater sounded on 12/02/96.
						110				...(110'–115') light bluish gray (5B8/1), feldspar– and quartz–rich felsic dike(s). ...(116'–120') – no visible dikes.	Dry.
9:22						115				...(120'–137') – abundant fragments of medium– to coarse–grained potassium–feldspar and minor quartz dike(s). Host rock TONALITE shows evidence of moderate chlorite–epidote hydrothermal alteration. Fractures show possible zeolite veining with minor oxidation staining on non–mineral filled fractures. Host rock TONALITE is bluish	
						120				gray (5PB5/1), aphanitic to phaneritic (very fine– to fine–crystallinity) with abundant biotite and hornblende.	Dry.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-4

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER / M. VINCENT, CEG

DATE STARTED: 11/26/96
DATE FINISHED: 11/27/96
ELEVATION: 905 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 103.2 feet
TOTAL DEPTH: 240 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						120				...(120'-137') - abundant fragments of medium- to coarse-grained potassium-feldspar and minor quartz dike(s). Host rock TONALITE shows evidence of moderate chlorite-epidote hydrothermal alteration. Fractures show possible zeolite veining with minor oxidation staining on non-mineral filled fractures. Host rock TONALITE is bluish gray (5PB5/1), aphanitic to phaneritic (very fine- to fine-crystallinity) with abundant biotite and hornblende.	...(120') - dry.
						125					
						130					...(130') - dry. Moderately hard drilling.
						135					Groundwater sounded at 103.2' below ground surface on 12/02/96 at 6:55.
8:08						140					No free groundwater while drilling or stacking rods.
						145					Hard drilling. No free groundwater while drilling or stacking rods.
8:24						150					...(149.93') - groundwater sounded on 12/16/96.
						155				...(154') - color change to bluish gray to dark bluish gray (10B4.5/1) with increase in felsic mineral content and increase in crystal size to fine- to medium-crystallinity; anhedral to subhedral feldspar crystals. Cuttings show a weak foliation as evidenced by the segregation of mafic and felsic minerals, and by the preferred orientation of biotite crystals. No visible oxidation of fractures. Rock is unfractured to weakly fractured. No chlorite-epidote alteration visible.	
8:36						160					Hard to very hard drilling. No free groundwater encountered.
						165					
						170					Hard to very hard drilling. No free groundwater encountered.
						175				...(175') - same as above.	
9:10						180					Hard to very hard drilling. No free groundwater encountered.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-4

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER / M. VINCENT, CEG

DATE STARTED: 11/26/96
DATE FINISHED: 11/27/96
ELEVATION: 905 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 103.2 feet
TOTAL DEPTH: 240 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:10						180					
						185				...(185') - same as above.	
						190				...(190') - better developed foliation with depth. No visible jointing or fracturing.	Hard to very hard drilling No free groundwater encountered.
						195				...(195'-240') - same as above.	
9:43						200					Hard to very hard drilling. No free groundwater encountered.
						205					
						210					Hard to very hard drilling. No free groundwater encountered.
						215					
10:23						220					Hard to very hard drilling. No free groundwater encountered.
						225					
						230					Hard to very hard drilling. No free groundwater encountered.
						235					
	11:08					240					

Notes:

1. Total depth of borehole 240 feet.
2. Conductor casing set to 30 feet.
3. Open hole interval (exposed bedrock) between 30 and 240 feet below ground surface.
4. Groundwater first encountered between 103 and 140 feet.
5. Depth to water on 12/16/96 measured at 149.93 feet.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-5

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/20/96
DATE FINISHED: 11/21/96
ELEVATION: 930 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 41 feet
TOTAL DEPTH: 190 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/20 11:20						0–15			SM SP	COLLUVIUM/RESIDUAL SOIL: SILTY SAND with coarse-grained SAND and fine-grained GRAVEL and minor CLAY; sub-angular sand and gravel size clasts of TONALITE and LEUCOGRANODIORITE. Dark reddish brown (5YR3/3).	Damp.
						15–25				WEATHERED TONALITE. Light olive brown (2.5Y5/3). Drills as a medium- to coarse-grained sand. Minor quartz and feldspar dikes.	Damp. ...(20') – damp.
						25–40				TONALITE. Gray (2.5Y6/1) to light brownish gray (2.5Y6/2). Moderately weathered. Drills as a fine- to coarse-grained sand with minor fine-grained gravel size fragments. Minor quartz/feldspar dikes.	Less damp.
15:57						40–60	11/21/96 12/16/96			TONALITE/QUARTZ DIORITE. Olive (5Y5/3) cuttings, with black (N2.5) and dark gray (N4) lithic fragments. More mafic than above. Drills as a fine-grained sand. ...(50'-55') – color change to light brownish gray (2.5Y6/2) to olive gray (5Y6/2).	
						60–				TONALITE. Gray (5Y6/1). Moderately weathered. Less mafic than above.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-5

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/20/96
DATE FINISHED: 11/21/96
ELEVATION: 930 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 41 feet
TOTAL DEPTH: 190 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						60				TONALITE. Gray (5Y6/1). Moderately weathered. Less mafic than above.	
						65					
						70					
						75				...(75'-80') - slightly more felsic, gray (2.5Y6/1) TONALITE; cuttings are sand-size with quartz/feldspar fragments.	
16:27	16:24					80				TONALITE/QUARTZ DIORITE. Gray (N5) lithic fragments. More mafic than above; chlorite alteration of mafics.	
						85				...(85'-90') - felsic cuttings increase to 20% (probably indicates quartz/potassium feldspar dikes in the TONALITE/QUARTZ DIORITE). Felsic fragments have pink (5YR7/4) potassium feldspar. Chlorite alteration of mafics in the TONALITE.	
						90					...(93'-96') - "soft" drilling.
						95				GRANODIORITE. Bluish gray (5B6/1 to 5/1) with minor reddish yellow (5YR7/6); potassium feldspar and quartz cuttings. GRANODIORITE fragments are chloritized. White coatings on some fractures (zeolite?). ...(100') - decrease in felsic cuttings to less than 10%. Majority of cuttings are of TONALITE with granodiorite dikes; some feldspar and chlorite alteration of mafics; gray (N5).	
						100	▽				...(100') - moist.
						105					
11/21										TONALITE. Gray (N5). Moderate to slightly weathered and fractured.	...(105') - damp.
						110				...(110') - very minor fragments of quartz/feldspar with minor mafics as veins/dikes in TONALITE.	
						115					
	7:35					120					...(120') - water coming up hole.

CONTINUED ON NEXT PAGE

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-5

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/20/96
DATE FINISHED: 11/21/96
ELEVATION: 930 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 41 feet
TOTAL DEPTH: 190 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
7:35						120					...(120') - water coming up hole.
						125					
						130				TONALITE. Gray (N5). Slightly weathered; fractured. Chlorite alteration of mafics. Less than 1% quartz/feldspar fragments from dikes, and a few rare fragments of zeolite(?) from fracture infilling; minor iron oxide staining.	
						135					
						140					
						145					
						150					
						155					
						160					
						165				...(165') - increase in felsic fragments to 40%.	Sample is wet.
9:08	9:07	0.54				170				...(170') - increase in quartz/feldspar dikes. Decrease in chlorite alteration.	Drier.
						175				...(175') - decrease in felsic fragments to less than 10%.	
9:27	9:23	0.67				180				TONALITE/QUARTZ DIORITE. ...(180') - less than 3% felsic fragments.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-5

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/20/96
DATE FINISHED: 11/21/96
ELEVATION: 930 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 41 feet
TOTAL DEPTH: 190 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:27						180				...(180') - less than 3% felsic fragments.	
						185					
	9:47	0.50				190				...(190') - increase in felsic fragments to 10%.	Lost bit downhole.
						195					
						200					
						205					
						210					
						215					
						220					
						225					
						230					
						235					
						240					

Notes:

1. Total depth of borehole 190 feet.
2. Conductor casing set to 30 feet.
3. Open hole interval (exposed bedrock) between 30 and 190 feet below ground surface.
4. Groundwater first encountered at 100 feet.
5. Depth to water on 12/16/96 measured at 42.57 feet.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-7

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/21/96
DATE FINISHED: 11/21/96
ELEVATION: 403 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 50 feet
TOTAL DEPTH: 160 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/21 13:55						0			SM SW	COLLUVIUM: SILTY SAND, coarse-grained; contains fine gravel fragments. Yellowish brown (10YR5/7).	Damp.
						5			SW	SAND (DG?). Light yellowish brown (2.5YR6/4). May be boulder of decomposed leucogranodiorite.	
						10				DECOMPOSED ROCK (TONALITE?): Olive (5Y5/3). Drills as a fine- to medium-grained sand. Oxidized fragments of brownish yellow (10YR6/8) quartz/ potassium feldspar.	...(10') - damp.
						15					
						20				TONALITE/DIORITE. Very dark gray (5Y3/1). Sub-angular to subrounded oxidized fragments.	
						25				TONALITE. Gray (N5). Highly weathered and decomposed. Drills as an olive (5Y5/3), fine- to coarse-grained sand.	...(25') - damp.
						30					
						35	12/16/96				
						40				...(40') - color change to olive gray (5Y5/2 to 4/2).	
						45					
						50					...(50') - groundwater encountered.
						55					
	14:20					60				TONALITE. Olive (5Y4/3). Highly weathered. Drills as a fine- to coarse-grained sand. Large fragments are gray (N5).	...(60') - abundant water coming out of hole on 11/22/96.
11/22 8:25											

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-7

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/21/96
DATE FINISHED: 11/21/96
ELEVATION: 403 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 50 feet
TOTAL DEPTH: 160 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:25						60				TONALITE. Olive (5Y4/3). Highly weathered. Drills as a fine- to coarse-grained sand. Large fragments are gray (N5).	...(60') - abundant water coming out of hole on 11/22/96.
						65				...(65') - moderately weathered TONALITE.	...(65') - damp.
8:35	8:31	1.67				70				...(70') - color change to olive gray (5Y4/2). Lithic fragments are larger and appear less weathered.	...(70') - moist.
						75					
						80					
						85				...(85') - approximately 35% of lithic fragments are of white (N8) quartz/feldspar dikes. TONALITE fragments are very dark gray (N3).	...(85') - moist.
						90					
						95					
8:52	8:50	1.33				100				...(100') - color of cuttings change to dark gray (N4). Lithic fragments of TONALITE are very dark gray (N3); less than 5% felsic fragments. Slight weathering.	...(100') - wet.
						105					
						110					
						115				...(115') - color of cuttings changes to very dark gray (N3). TONALITE fragments are very mafic with dark gray (N4) plagioclase (borderline GABBRO). Slightly weathered. Tonalite fragments are black (N2.5).	
9:24	9:21	0.69				120					...(120') - abundant water in hole.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-7

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 11/21/96
DATE FINISHED: 11/21/96
ELEVATION: 403 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 50 feet
TOTAL DEPTH: 160 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:24						120				...same as above.	...(120') - abundant water in hole.
						125					
						130					
						135					
9:54	9:49	0.80				140				...(140') - increase in felsics to 40% (probably derived from quartz/feldspar dikes in TONALITE).	
						145				GRANODIORITE. Gray (N6) with pale red (2.5YR7/2) orthoclase feldspars. Olive (5Y4/4) chlorite/epidote alteration of some clasts, particularly along fracture surfaces.	
						150				TONALITE. Dark gray (N4) with less than 5% felsic fragments.	
						155					
	10:21	0.74				160				GRANODIORITE. Gray (N6) with only rare pale red (2.5YR7/2) potassium feldspar.	
						165					

Notes:

1. Total depth of borehole 160 feet.
2. Conductor casing set to 30 feet.
3. Open hole interval (exposed bedrock) between 30 and 160 feet below ground surface.
4. Groundwater first encountered at 50 feet.
5. Depth to water on 12/16/96 measured at 34.82 feet.

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates

BORING LOG

BORING NO.: GLA-8

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG; T. REEDER

DATE STARTED: 11/24/96
DATE FINISHED: 11/25/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 61 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/24 9:20						0				WEATHERED BEDROCK - TONALITE. Light yellowish brown (10YR6/4). Phaneritic with fine-crystallinity, amphibole-rich and biotite-rich. Some hydrothermal alteration to chlorite-epidote facies.	
						5				...(6') - color change to light gray (10YR7/1).	
						10				...(10') - color change to gray (2.5Y6/1). Less oxidation of biotite than above.	
						15					Conductor casing set to 15'. Begin drilling 5-inch diameter with downhole carbide button hammer.
						20					
						25				...(24') - color change to gray (5Y6/1) to light olive gray (5Y6/2). Increase in chlorite-epidote alteration products and minor increase in iron-oxide alteration products.	Slightly damp.
						30					
						35					
11:45						40					
						45				UNWEATHERED BEDROCK - TONALITE. Gray (5Y6/1). Phaneritic with fine-crystallinity, subhedral crystals, biotite and hornblende-rich. Pervasive, moderate to weak chlorite-epidote hydrothermal alteration.	
						50					
						55				...(53'-56') - color change to light brownish gray (2.5Y6/2). Increase in jointing/fracturing as evidenced by increase in oxidation products and weathered feldspar phenocrysts.	
						60	11/25/96				
							12/16/96				

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-8

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG; T. REEDER

DATE STARTED: 11/24/96
DATE FINISHED: 11/25/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 61 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						60	11/25/96				
							12/16/96				
						65				...(64') – color change to light yellowish brown (2.5Y6/3.5).	
						70				...(67'–78') – possible weathered joints as evidenced by alternating zones of light yellowish brown (10YR6/4) weathered rock and greenish gray (10BG5/1) unweathered rock. Contains fragments of dark gray (N4) to greenish gray (10BG5/1), micaceous and amphibole-rich TONALITE with fine- to medium-crystallinity phenocrysts of weak red (10R4/3) feldspar.	
						75					...(75') – slightly damp.
12:08						80				...(78') – color change to greenish gray (5BG5/1).	
12:53	12:28					85				...(81'–86') – TONALITE to GRANODIORITE. Phaneritic with medium crystallinity; subhedral to euhedral, white to light red (2.5YR6.5/8) potassium feldspar phenocrysts. Minor amounts of white to light red (2.5YR6.5/8) 1/32-inch thick mineral vein infilling (zeolite?) on some fracture surfaces. Mineral veins show some reaction with the host rock, as evidenced by epidote alteration envelopes. ...(86') – groundwater encountered in weathered fracture zone. Weathered rock is pale olive (5Y6/3) in color.	...(83') – larger pieces of sample expelled from the cyclone. ...(85') – stop at 12:28 to trip rods out of hole to repair downhole hammer. ...(86') – groundwater encountered. Mineral vein materials do not appear to react to weak HCl solution.
						90					...(90') – very dry.
						95					
						100				...(98') – decrease in amount of weathered fracture zones. Abundant healed fractures showing shear structures in possible hydrothermal (zeolite) mineral veins approximately 1/2-inch thick.	...(100'–105') – somewhat abundant groundwater.
						105					
						110					
						115					
13:26		1.17				120					

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-8

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG; T. REEDER

DATE STARTED: 11/24/96
DATE FINISHED: 11/25/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 61 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
13:26						120					
						125					
										...(128') - increase in mafic minerals with associated color change to brownish gray (10B5/1).	
13:38						130					
										...(135'-140') - healed fractures showing shear structures in possible hydrothermal (zeolite) mineral veins approximately 1/2-inch thick. Veins contain 1/32-inch to 1/16-inch diameter TONALITE fragments as inclusions. Vein materials are typically greenish gray (5BG6/1) in color with less than 1/64-inch thick iron-oxide and pyrolusite coatings between the vein material and the host-rock.	
	13:45					135					
14:25											...(135') - stop drilling at 13:45 to trip out rods due to blockage in the downhole hammer. Begin drilling with tri-cone bit.
14:42						140					
	15:10	0.22				145				...(143') - abundant olive gray to light red (2.5YR5/8), euhedral feldspar phenocrysts. A weak foliation is evidenced by the partial segregation of mafic and felsic minerals and by the preferred orientation of platy feldspar and biotite phenocrysts. No visible signs of mineral veining on fracture surfaces.	
15:32											...(145') - stop drilling at 15:10. Trip out rods and replace tri-cone bit with downhole hammer.
						150				...(150') - minor occurrence of mineral veining along fracture surfaces, along with non-mineralized fractures.	
15:44		1.11				155					
						160				...(160') - same as above.	
						165				...(165') - same as above.	
										...(169') - decrease in the amount of feldspar phenocrysts with light red (2.5YR5/8) coloration. Most phenocrysts are white.	
16:01		1.43				170					
										...(172') - increase in amount of mineral veining with associated increase in chloritization. Possible fracture zone.	
16:10						175					
										...(177') - most feldspar phenocrysts are colored light red (2.5YR5/8).	
						180				...(180'-185') - decrease in light red colored feldspar phenocrysts and increase in white colored feldspar.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-8

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG; T. REEDER

DATE STARTED: 11/24/96
DATE FINISHED: 11/25/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 61 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						180				...(180'-185') - decrease in light red colored feldspar phenocrysts and increase in white colored feldspar.	
						185					
						190				...(190') - same as above.	
						195				...(195') - same as above.	
						200					
						205				TONALITE - dark gray (N4), weathered, with some epidote alteration of feldspar, quartz and granodiorite veins.	...(205') - wet.
						210				CONTACT ZONE: mixed TONALITE and LEUCOGRANODIORITE - mineralogy includes: greenish gray (5G6/1), altered plagioclase; pale red (2.5YR7/2) to light red (2.5YR7/6) orthoclase; white (N8) quartz and plagioclase; dark gray (N4) to dark greenish gray (5GY4/1) mafics (pyroxene, hornblende and biotite). Quartz-filled veins in some of the cuttings.	
						215				...(215') - increase to 80% of cuttings of LEUCOGRANODIORITE with potassium-feldspar and some mafics.	
						220				...(220') - equal proportions in cuttings of greenish gray (5G6/1) TONALITE(?) to pale red (2.5YR7/2) LEUCOGRANODIORITE.	
						225				...(225') - mix of dark gray (N4) TONALITE and light red (2.5YR7/2) LEUCOGRANODIORITE.	
						230				...(230') - approximately 70% greenish gray (5G6/1), altered TONALITE and 30% pale red (2.5YR7/2) GRANODIORITE.	
						235				...(235') - cuttings become darker due to increase in dark gray (N4) mafics.	
11/25 8:14						240				...(240') - TONALITE is dark gray (N4) with greenish gray (5G6/1), altered plagioclase and dark gray (N4) mafics. Decrease in potassium-feldspar/LEUCOGRANODIORITE fragments to less than 15%.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-8

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG; T. REEDER

DATE STARTED: 11/24/96
DATE FINISHED: 11/25/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: 61 feet
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11/25 8:14						240				...(240') – TONALITE is dark gray (N4) with greenish gray (5G6/1), altered plagioclase and dark gray (N4) mafics. Decrease in potassium-feldspar/LEUCOGRANODIORITE fragments to less than 15%.	
						245				...(245') – increase in LEUCOGRANODIORITE fragments to about 30%; color intensifies to light red (2.5Y7/6).	
						250				...(250') – TONALITE color becomes lighter – gray (N5). Less than 5% LEUCOGRANODIORITE fragments.	
						255				...(255') – same as above, with minor greenish gray (5G6/1 to 5GB6/1), altered (chloritized?) plagioclase.	
	8:35	0.95				260				...(260') – approximately 10% LEUCOGRANODIORITE fragments.	
8:38										TONALITE/GRANODIORITE – gray (N5) to dark gray (N4), with some greenish gray (5G6/1), altered (chloritized?) plagioclase, and LEUCOGRANODIORITE dikes with less than 2% pale red (2.5YR7/2) to light red (2.5YR7/6) orthoclase.	
						265				...(265') – mix of LEUCOGRANODIORITE and GRANODIORITE cuttings. Some greenish gray (5G6/1) altered plagioclase.	
						270					
						275				...(275') – same as above.	
	8:54	1.25				280				...(280') – orthoclase feldspar/ leucogranodiorite fragments decrease to less than 5%.	
8:58						285				...(285') – increase in LEUCOGRANODIORITE fragments to approximately 35%.	
						290				...(300') – decrease in orthoclase feldspar to approximately 15%; increase in greenish gray (5G6/1), altered plagioclase.	
						295				NOTES: 1. Total depth of borehole 300 feet. 2. Conductor casing set to 15 feet. 3. Open hole interval (exposed bedrock) between 15 and 300 feet below ground surface. 4. Groundwater first encountered at 86 feet. 5. Depth to water on 12/16/96 measured at 62.40 feet.	
	9:17	1.05				300					

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-9

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: Not encountered
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						0				DECOMPOSED TONALITE. Olive gray (5Y4/2). Highly weathered and decomposed. Drills as a fine-grained sand to silty sand with coarse-grained sand to fine-grained gravel size fragments.	Drilling on cut - all topsoil removed. Damp.
						5					
						10				LEUCOGRANODIORITE DIKE. Light yellowish brown (2.5Y6/4) to pale yellow (2.5Y7/4). Highly weathered and decomposed. Fe-oxide staining, and oxidation and chloritization of mafics.	Damp.
						15					
						20					
						25				TONALITE. Dark gray (5Y4/1) to very dark gray (5Y3/1). Moderately weathered. Minor Fe-oxide staining; some chloritization of mafics.	Damp.
						30					
						35				...(35') - quartz veins in TONALITE.	
14:00						40				GRANODIORITE dike in TONALITE (about 60% GRANODIORITE). Light gray (2.5Y7/2) to pale yellow (2.57/3). Oxidized; weathered; some epidote alteration of feldspar and chloritization of mafics.	
						45				DIORITE/TONALITE. Black (N2.5) to very dark gray (N3). Slightly to moderately weathered. Altered biotite on some fragments; minor epidote alteration of some feldspars. Cuttings include fragments of GRANODIORITE; oxidized with some epidote and chlorite alteration. ...(50') - very minor quartz/feldspar fragments in cuttings.	Damp.
						50					
						55				GRANODIORITE dike in TONALITE. White (N8) and black (N2.5) mafics. Approximately 30% GRANODIORITE and 70% TONALITE.	
14:22	14:20	1				60				DIORITE/TONALITE. Very dark gray (N3) to black (N2.5) with GRANODIORITE fragments in cuttings. Slightly weathered to fresh. Zeolite(?) and chlorite as fracture infillings; minor disseminated pyrite in veins and in host rock at contact.	

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BORING LOG

BORING NO.: GLA-9

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: Not encountered
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
14:22						60				DIORITE/TONALITE. Very dark gray (N3) to black (N2.5) with GRANODIORITE fragments in cuttings. Slightly weathered to fresh. Zeolite(?) and chlorite as fracture infillings; minor disseminated pyrite in veins and in host rock.	
						65				DIORITE. Very dark gray (N3) to black (N2.5). Slightly weathered to fresh; minor chloritization. No quartz/feldspar fragments.	...(65') - damp to dry. Hard drilling.
						70					
						75					
14:46	14:43	0.95				80					
						85					...(85'-90') - very hard drilling. Broke tooth off bit.
						90					
						95					
15:24	15:19	0.61				100				DIORITE. Very dark gray (N3) to black (N2.5) with minor quartz/feldspar veins with some zeolite(?) alteration/infillings along fractures and chloritization.	
						105					
						110					
						115					
						120					

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BORING LOG

BORING NO.: GLA-9

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: Not encountered
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
14:22						60				DIORITE/TONALITE. Very dark gray (N3) to black (N2.5) with GRANODIORITE fragments in cuttings. Slightly weathered to fresh. Zeolite(?) and chlorite as fracture infillings; minor disseminated pyrite in veins and in host rock.	
						65				DIORITE. Very dark gray (N3) to black (N2.5). Slightly weathered to fresh; minor chloritization. No quartz/feldspar fragments.	...(65') – damp to dry. Hard drilling.
						70					
						75					
14:46	14:43	0.95				80					
						85					...(85'–90') – very hard drilling. Broke tooth off bit.
						90					
						95					
15:24	15:19	0.61				100				DIORITE. Very dark gray (N3) to black (N2.5) with minor quartz/feldspar veins with some zeolite(?) alteration/infillings along fractures and chloritization.	
						105					
						110					
						115					
						120					

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BORING LOG

BORING NO.: GLA-9

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: Not encountered
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
16:02	15:58	0.59				120					
						125				...(125') - no apparent quartz/feldspar dikes.	
						130				DIORITE. Very dark gray (N3) to black (N2.5). Fresh; hard. Quartz/feldspar fragments with altered biotite and some epidote alteration of feldspars. Very minor disseminated pyrite.	Rock is fractured, but very hard - breaking buttons off bit. Dry.
						135				...(135') - no apparent quartz/feldspar fragments.	
12/06 8:20						140					
						145					
						150				DIORITE. Very dark gray (N3) to black (N2.5). Fresh; very hard; mostly unaltered. Very minor quartz/feldspar fragments with some chloritized biotite.	
						155					
	8:46	0.77				160					
						165					
						170					
						175				...(175') - DIORITE with GRANODIORITE/ TONALITE dikes. Chlorite alteration, especially along contact of dikes with DIORITE.	
9:20						180				Altered GRANODIORITE and quartz/feldspar dikes in TONALITE. Greenish gray (5G5/1). Chloritization of some fractures, and thin coatings of zeolite(?) along some fracture surfaces.	Dry.

CONTINUED ON NEXT PAGE

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BORING LOG

BORING NO.: GLA-9

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: Not encountered
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:20						180				Altered GRANODIORITE and quartz/feldspar dikes in TONALITE. Greenish gray (5G5/1). Chloritization of some fractures, and thin coatings of zeolite(?) along some fracture surfaces.	Dry.
						185				...(185') - TONALITE without felsic fragments.	
						190				...(190') - more mafic - DIORITE.	
						195				...(195') - minor quartz/feldspar fragments in cuttings.	
10:22	9:46	0.77				200				...(200') - DIORITE/TONALITE. Dark gray (N4); increase in felsic fragments in cuttings.	Wait 20 minutes for water. No water.
						205					
						210				...(210') - minor quartz/feldspar fragments in cuttings.	
						215				...(215') - some chloritized fragments - look like fracture coatings; very dark gray (N3).	
10:51	10:47	0.80				220				TONALITE/DIORITE. Very dark gray (N3). Hard; fresh. Very minor granodiorite fragments with some disseminated pyrite(?).	
						225				...(225') - some chloritized fragments, dark greenish gray (5G4/1 to 5BG4/1).	
						230				...(230') - DIORITE. Dark gray (N4) to gray (N5). Less mafics.	
						235					
11:20	11:15	0.83				240					

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-9

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: T. REEDER

DATE STARTED: 12/05/96
DATE FINISHED: 12/07/96
ELEVATION: ND
NORTHING: ND
EASTING: ND

GW DEPTH: Not encountered
TOTAL DEPTH: 300 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
11:20						240					
						245					
	11:35	0.67				250					
14:27										...(250') - cuttings are very dark gray (N3) to gray (N4); minor quartz/feldspar fragments.	Changing bit. Fuel up. Let hole sit over one hour - end of sounder is moist, but no free water in hole.
						255				...(255') - DIORITE with no apparent quartz/feldspar dikes. More mafic; darker.	
	14:48	0.48				260					
14:53											
						265					
						270				...(270') - very minor quartz/feldspar fragments in cuttings.	
						275					
	15:50	0.35				280					
12/07 8:30											Change bit.
						285				TONALITE. Minor quartz/feldspar dikes with chloritized mafics along contact with TONALITE.	About 0.5" of water at bottom of hole on 12/07 (condensation?).
						290				TONALITE/GABBRO. Very dark gray (N3). Fresh; hard; tight. Minor quartz/feldspar dikes. Minor chloritization of some mafics.	Used up 4 bits (last one only made it 20 feet) - too many carbide fragments in hole. Rubber fitting on bit broke.
						295					
	8:57	0.74				300				NOTES: 1. Total depth of borehole 300 feet. 2. Conductor casing set to 30 feet. 3. Open hole interval (exposed bedrock) between 20 and 300 feet below ground surface. 4. No free groundwater encountered.	

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-10

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG / T. REEDER

DATE STARTED: 12/03/96
DATE FINISHED: 12/05/96
ELEVATION: 325 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 33 feet
TOTAL DEPTH: 150 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
12/03 11:57						0				ALLUVIUM: SAND to SILTY SAND – very fine– to medium–grained with minor coarse sand to pebbles, with boulders of granodiorite and lesser amounts of tonalite. SAND is poorly sorted, micaceous and feldspathic. Dark brown (7.5YR3/3.5).	
						5			SW/SM		Dry to damp.
						10				...(10'–20') – gradational color change to pinkish gray to brown (7.5YR5/2) with associated decrease in silt and micaceous minerals.	...(10') – dry to damp.
						15					...(15') – dry to damp.
						20	12/16/96				...(17') – groundwater encountered.
12:35	12:16	1.32				25			SW	GRAVELLY SAND – poorly sorted, medium– to very coarse–grained, arkosic. Abundant subrounded to sub–angular, tonalitic and granodioritic GRAVEL to BOULDERS.	...(25') – stop drilling to repair rig at 12:16. Start drilling again at 12:35.
						30					
						35				WEATHERED BEDROCK – TONALITE: Dark gray (2.5Y4/1) to dark grayish brown (2.5Y4/2). Phaneritic with fine– to medium– crystallinity. Biotite– and hornblende–rich. Weakly weathered with moderate to strong oxidation of biotite and hornblende to chlorite, and with minor alteration of feldspar crystals to clay.	...(33') – wet.
						40					...(40') – wet.
						45				...(45'–50') – predominantly fine–crystallinity.	...(45') – damp.
						50					...(50') – moist to dry. Set conductor casing to 50' below ground surface.
						55				...(53') – color change to olive gray (5Y5/2).	...(55') – dry.
						60					...(60') – dry.

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-10

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG / T. REEDER

DATE STARTED: 12/03/96
DATE FINISHED: 12/05/96
ELEVATION: 325 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 33 feet
TOTAL DEPTH: 150 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						60					...(60') – dry.
										...(62') – color change to dark greenish gray (10Y4/1).	
						65					
						70				...(70') – color change to pale olive to olive (5Y5.5/3).	
										...(73') – color change to greenish gray (5GY5.5/1).	
						75					
										...(77') – color change to gray (N5).	
12/05 8:54	13:04					80					...(80') – stop drilling to set conductor casing to 50' below ground surface.
						85				TONALITE/DIORITE. Very dark gray (N3). Weathered and moderately decomposed. Fe-oxide stained with altered mica and/or pyrite on oxidized pieces; chloritization of some mafics.	...(87') – water production from borehole while drilling approximately 5–6 gpm.
						90				GRANODIORITE dikes in TONALITE. White (N8). Contains black (N2.5) mafic minerals (biotite, hornblende and pyroxene). Very slight chloritization of some mafics (pyroxene) in very dark gray (N3), weathered and moderately decomposed TONALITE.	...(90') – wet.
						95				...(95') – less than 10% GRANODIORITE dike fragments in TONALITE.	
9:27	9:25	0.65				100				...(100') – 40% GRANODIORITE in TONALITE.	
						105				...(105') – dark gray (N4) mixed TONALITE and GRANODIORITE.	Moist.
						110				Gray (N5 to N6) GRANODIORITE.	
						115				Gray (N5 to N6) GRANODIORITE/TONALITE.	...(115') – wet.
10:05	10:02	0.57				120				...(120') – same as above.	Wet.

CONTINUED ON NEXT PAGE

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GeoLogic Associates

BORING LOG

BORING NO.: GLA-10

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON
DRILLING METHOD: DUAL-WALL REVERSE, AIR
CONTRACTOR: LAYNE - ENVIRONMENTAL
LOGGED BY: M. VINCENT, CEG / T. REEDER

DATE STARTED: 12/03/96
DATE FINISHED: 12/05/96
ELEVATION: 325 feet
NORTHING: ND
EASTING: ND

GW DEPTH: 33 feet
TOTAL DEPTH: 150 feet

TIME START	TIME STOP	RATE, FT/MIN	WATER SAMPLE INTERVAL	SAMPLE SIZE, INCHES	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
10:05						120				...(120') - same as above.	Wet.
						125				...(125') - less than 5% orthoclase feldspar.	
						130				...(130') - no potassium-feldspar; less than 5% GRANODIORITE dikes in TONALITE.	
						135				...(135') - increase in GRANODIORITE to approximately 50% of cuttings; moderately weathered, with minor pink potassium-feldspar.	
10:47	10:44	0.51				140				...(140') - moderately weathered TONALITE with GRANODIORITE dikes.	
						145				Gray (N6), moderately weathered TONALITE/ GRANODIORITE with some epidote/chlorite alteration.	...(145') - wet.
	11:06	0.53				150				...(150') - less than 1% epidote or zeolite alteration and fracture infillings.	
						155					

Notes:

1. Total depth of borehole 150 feet.
2. Conductor casing set to 50 feet.
3. Open hole interval (exposed bedrock) between 50 and 150 feet below ground surface.
4. Groundwater first encountered at 33 feet.
5. Depth to water on 12/16/96 measured at 22.20 feet.

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates
Boring Log

BORING NO.: GLA-11

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/30/99
DATE FINISHED: 11/30/99
ELEVATION: 775.22
NORTHING: 2070002.607
EASTING: 6300855.954

GW DEPTH: 231 feet
TOTAL DEPTH: 243 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:20						0			SM/ ML	SOIL: Strong brown (7.5YR5/6) SILTY SAND to SANDY SILT with CLAY. SAND is fine- to medium-grained and moderately graded.	Dry.
						5				WEATHERED BEDROCK: Olive gray (5Y5/2), phaneritic, fine-grained, moderately weathered and oxidized HORNFELS.	
						10					
						15					
						20					
8:42						25					
8:46										...(28') - color grades to gray 5Y5/1.	
						30					
						35					
						40					
8:55						45					
9:03											
						50				UNWEATHERED BEDROCK: Dark gray (N4), phaneritic, fine-grained, subhedral, hornblend rich HORNFELS.	Dry.

CONTINUED ON NEXT PAGE

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GeoLogic Associates
Boring Log

BORING NO.: GLA-11

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/30/99
DATE FINISHED: 11/30/99
ELEVATION: 775.22
NORTHING: 2070002.607
EASTING: 6300855.954

GW DEPTH: 231 feet
TOTAL DEPTH: 243 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						50				UNWEATHERED BEDROCK: Dark gray (N4), phaneritic, fine-grained, subhedral, hornblend rich HORNFELS.	Dry.
						55					
						60					
9:25						65					
9:29											
						70				...(70'-80') ~ moderately weathered.	
						75					
						80					
9:50						85					
9:55											
						90					
						95					
						100				Strong brown (7.5YR5/8) to white (7.5YR8/1), phaneritic, fine- to coarse-grained, moderately weathered, subhedral to euhedral GRANODIORITE dikes in HORNFELS with potassium feldspar phenocrysts.	Dry.

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates
Boring Log

BORING NO.: GLA-11

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/30/99
DATE FINISHED: 11/30/99
ELEVATION: 775.22
NORTHING: 2070002.607
EASTING: 6300855.954

GW DEPTH: 231 feet
TOTAL DEPTH: 243 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						100				Strong brown (7.5YR5/8) to white (7.5YR8/1), phaneritic, fine- to coarse-grained, moderately weathered, subhedral to euhedral GRANODIORITE dikes in HORNFELS with potassium feldspar phenocrysts.	Dry.
10:22						105					
10:28											
						110				HORNFELS with minor GRANODIORITE dikes.	Dry.
						115					
						120					
11:00						125					
11:05											
						130					
						135					
						140				...(141'-144') - GRANODIORITE dike.	
11:37						145					
11:45											
						150				...(150') - predominantly mafic with no dikes.	Dry.

CONTINUED ON NEXT PAGE

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GeoLogic Associates
Boring Log

BORING NO.: GLA-11

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/30/99
DATE FINISHED: 11/30/99
ELEVATION: 775.22
NORTHING: 2070002.607
EASTING: 6300855.954

GW DEPTH: 231 feet
TOTAL DEPTH: 243 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						150				...(150') - predominantly mafic with no dikes.	Dry.
						155					
						160					
12:22						165					
12:26											
						170					Dry.
						175					
						180					
13:04						185					
13:10											
						190				...(189'-191') - GRANODIORITE dike.	
						195					
						200					Dry.

CONTINUED ON NEXT PAGE

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GeoLogic Associates
Boring Log

BORING NO.: GLA-11

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/30/99
DATE FINISHED: 11/30/99
ELEVATION: 775.22
NORTHING: 2070002.607
EASTING: 6300855.954

GW DEPTH: 231 feet
TOTAL DEPTH: 243 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						200				...same as above.	Dry.
13:47						205					
13:51						210					
						215					
						220					Wait 30 minutes. Obstruction encountered at 158'. Tape is wet at 75'. Free groundwater encountered when drilling resumed.
14:28						225					
15:03						230	▽				
						235					
						240					Blow out water. Wait 10 minutes; borehole still produces water.
15:27											
						245				Notes: 1. Total depth of boring 243 feet. 2. Groundwater first encountered at 231 feet. 3. Monitoring well constructed on 12/2/99 (see Monitoring Well Completion Summary).	
						250					

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GeoLogic Associates
Boring Log

BORING NO.: GLA-12

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/24/99
DATE FINISHED: 11/24/99
ELEVATION: 343.91
NORTHING: 2070784.338
EASTING: 6299410.816

GW DEPTH: 36.7 feet
TOTAL DEPTH: 66.0 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:16						0			SM/ ML	SOIL: Strong brown (7.5YR4/6) SILTY SAND to SANDY SILT with CLAY. SAND is fine-grained and poorly graded.	Dry.
						5				WEATHERED BEDROCK: Strong brown (7.5YR4/4), fine-grained GRANODIORITE (GRUSS) weathered with iron-oxide staining and alteration of feldspar crystals to clay.	Damp.
						10					
						15					
8:38										Yellowish brown (10YR5/4) to brownish yellow (10YR6/6), phaneritic, fine- to medium-grained, moderately weathered and oxidized GRANODIORITE.	Damp. Switched from tri-cone bit to downhole hammer. Conductor casing set to 18'.
8:57						20					
										...(23') - gradational color change to pale yellow (5Y7/3).	
						25					
						30				UNWEATHERED BEDROCK: Pale yellow (5Y7/3), phaneritic, fine to coarse subhedral to euhedral GRANODIORITE with white to light red (2.5YR7/6) potassium feldspar phenocrysts.	Moist.
						35					
9:30						40					Wait 45 minutes. Sound for water. Groundwater encountered at 38 feet.
10:18											
						45					Very moist.
										...(48') - color change to light olive brown (2.5Y4/3).	
						50				...some as above.	Very moist.

CONTINUED ON NEXT PAGE

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GeoLogic Associates
Boring Log

BORING NO.: GLA-12

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/24/99
DATE FINISHED: 11/24/99
ELEVATION: 343.91
NORTHING: 2070784.338
EASTING: 6299410.816

GW DEPTH: 36.7 feet
TOTAL DEPTH: 66.0 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						50				...same as above.	Very moist.
						55					
						60					
10:38						65					Wait 2 hours. Sound for water. Groundwater sounded at 36.7 feet.
						70				Notes: 1. Total depth of boring 66 feet. 2. Groundwater first encountered at 38 feet. Static water level measured at 36.7 feet. 3. Monitoring well constructed on 11/24/99 (see Monitoring Well Completion Summary).	
						75					
						80					
						85					
						90					
						95					
						100					

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GeoLogic Associates
Boring Log

BORING NO.: GLA-13

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/22/99
DATE FINISHED: 11/23/99
ELEVATION: 355.90
NORTHING: 2070269.329
EASTING: 6298912.906

GW DEPTH: 49.7 feet
TOTAL DEPTH: 69.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
15:00						0			SM/ ML	SOIL: Light yellowish brown (10YR6/4) SILTY SAND to SANDY SILT. SAND is fine-grained and poorly graded.	Dry.
						5				WEATHERED BEDROCK: Strong brown (7.5YR5/8 to 7.5YR4/6), fine-grained TONALITE (GRUSS). Weathered with Fe-oxide staining and alteration of feldspar crystals to clay.	Damp.
						10					
						15					
						20					Switched from tri-cone to button bit.
15:17											
15:26						25				Olive (5Y5/3) to olive gray (5Y5/2), phaneritic, hornblend- and quartz-rich fine- to coarse-grained TONALITE with strong oxidation of hornblend and biotite phenocrysts.	Damp.
						30				...(30') - color grades to gray (5Y6/1).	
						35					
						40					
15:43											
15:46						45					Damp.
						50	▼			UNWEATHERED BEDROCK: Dark gray (5Y4/1) to white (5Y8/1), phaneritic, fine- to coarse-grained TONALITE to GRANODIORITE with abundant felsic minerals with lesser mafic minerals. Shows minor effects of iron-oxide staining.	Moist.

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GeoLogic Associates
Boring Log

BORING NO.: GLA-13

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/22/99
DATE FINISHED: 11/23/99
ELEVATION: 355.90
NORTHING: 2070269.329
EASTING: 6298912.906

GW DEPTH: 49.7 feet
TOTAL DEPTH: 69.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						50				UNWEATHERED BEDROCK: Dark gray (5Y4/1) to white (5Y8/1), phaneritic, fine- to coarse-grained TONALITE to GRANODIORITE with abundant felsic minerals with lesser mafic minerals. Shows minor effects of iron-oxide staining.	Moist.
						55					
							▽				Wait 20 minutes. Sound for water. Groundwater encountered at 58 feet and rising.
						60					
16:04											
11/23 7:46											Very hard drilling. Water enters borehole while drilling.
						65					
8:22											
						70				Notes: 1. Total depth of boring 69.5 feet. 2. Groundwater first encountered at 58 feet. Static water level measured at 49.7 feet. 3. Monitoring well constructed on 11/23/99 (see Monitoring Well Completion Summary).	
						75					
						80					
						85					
						90					
						95					
						100					

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GeoLogic Associates
Boring Log

BORING NO.: GLA-14

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/21/99
DATE FINISHED: 11/21/99
ELEVATION: 332.21
NORTHING: 2069847.129
EASTING: 6298115.681

GW DEPTH: 36.5 feet
TOTAL DEPTH: 63 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
7:35						0			SM/ ML	SOIL: Dark yellowish brown (10YR4/4) SILTY SAND to SANDY SILT with CLAY. SAND is fine-grained and poorly graded.	Dry.
7:47											
7:53						5					
						10					
8:08										WEATHERED BEDROCK: Strong brown (7.5YR5/8), fine-grained TONALITE (GRUSS) weathered with iron-oxide staining and alteration of feldspar crystals to clay.	Damp.
8:13						15					
						20				Light olive gray (5Y6/2) to gray (5Y5/1), phaneritic, fine- to coarse-grained, hornblend and quartz rich TONALITE with oxidation of hornblend and biotite phenocrysts. ...(20'-22') - white (5Y8/1), unweathered GRANODIORITE dike composed of predominantly quartz and feldspar phenocrysts.	Hard drilling.
8:33											
8:48						25					
10:30											
15:00						30					
						35					Moist.
15:45						40					
15:20											...(42') - groundwater first encountered.
						45					
15:26						50				UNWEATHERED BEDROCK: Dark gray (5Y4/1), phaneritic, subhedral, fine-grained, biotite- and hornblend-rich TONALITE.	Groundwater air lifted out of boring while drilling.
15:52											

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GeoLogic Associates
Boring Log

BORING NO.: GLA-14

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/21/99
DATE FINISHED: 11/21/99
ELEVATION: 332.21
NORTHING: 2069847.129
EASTING: 6298115.681

GW DEPTH: 36.5 feet
TOTAL DEPTH: 63 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
15:52						50				UNWEATHERED BEDROCK: Dark gray (5Y4/1), phaneritic, subhedral, fine-grained, biotite- and hornblend-rich TONALITE.	Groundwater air lifted out of boring while drilling.
						55					
						60					
16:15											
						65				Notes: 1. Total depth of boring 63 feet. 2. Groundwater first encountered at 42 feet. Static water level measured at 36.5 feet. 3. Monitoring well constructed on 11/22/99 (see Monitoring Well Completion Summary).	
						70					
						75					
						80					
						85					
						90					
						95					
						100					

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

GeoLogic Associates
Boring Log

BORING NO.: GLA-15

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: AIR ROTARY
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 11/19/99
DATE FINISHED: 11/19/99
ELEVATION: 304.82
NORTHING: 2068403.283
EASTING: 6297080.768

GW DEPTH: 12 feet
TOTAL DEPTH: 50 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
13:10						0			SM/ ML	ALLUVIUM: Light olive brown (2.5Y5/3) SILTY SAND to SANDY SILT. SAND is very fine-grained, poorly graded and micaceous.	Dry.
13:20						5			SM	Dark grayish brown (2.5Y4/2), poorly graded, fine- with trace of medium-grained, micaceous SILTY SAND.	Moist.
13:34						10	▼				Very moist.
13:47						15				...(15') - SAND grades to fine- to medium-grained.	Slightly wet.
13:53						20					
						25	▽				...(25') - groundwater first encountered.
						30					Slightly wet.
14:15						35				...(35') - contains trace amounts of coarse-grained SAND and GRAVEL.	Groundwater air lifted out of borehole while drilling.
16:50						40					
						45					
17:10						50				Notes: 1. Total depth of boring 50 feet. 2. Groundwater first encountered at 25 feet. Static water level measured at 12 feet. 3. Monitoring well constructed on 11/20/99 (see Monitoring Well Completion Summary).	

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GeoLogic Associates
Boring Log

BORING NO.: GLA-16

JOB NO.: 9539
SITE LOCATION: GREGORY CANYON LANDFILL
DRILLING METHOD: HOLLOW STEM AUGER – 8"ø
CONTRACTOR: WATER DEVELOPMENT CORPORATION
LOGGED BY: W. LOPEZ, CEG

DATE STARTED: 12/20/99
DATE FINISHED: 12/20/99
ELEVATION: 305.28
NORTHING: 2068429.193
EASTING: 6297089.329

GW DEPTH: 10.6 feet
TOTAL DEPTH: 33.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
10:00						0			SM/ ML	ALLUVIUM: Light olive brown (2.5Y5/3) SILTY SAND to SANDY SILT. SAND is very fine-grained, poorly graded and micaceous.	Dry.
						5			SM	Dark grayish brown (2.5Y4/2), poorly graded, fine- with trace of medium-grained, micaceous SILTY SAND.	Moist.
						10	▽				Slightly wet. ...(10.6') – groundwater first encountered.
						15					
						20					
						25					
						30					
10:15											
						35				Notes: 1. Total depth of boring 33.5 feet. 2. Groundwater first encountered at 10.6 feet. 3. Monitoring well constructed on 12/20/99 (see Monitoring Well Completion Summary).	
						40					
						45					
						50					

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

ATTACHMENT 2

PHOTO LOG OF GEOLOGIC CONTACTS

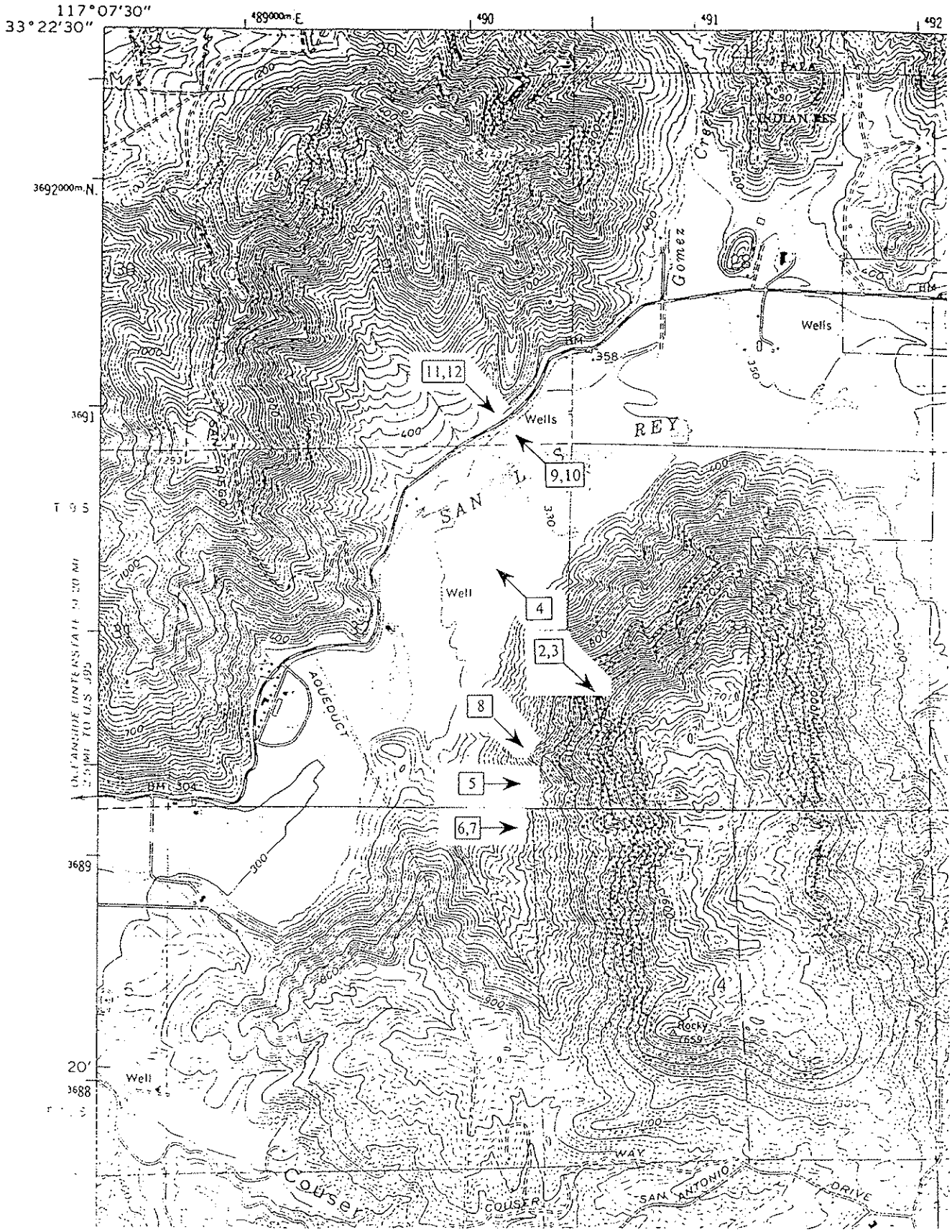


Figure 1. Location map, showing the view directions of the photographs in Figures 2 through 12.

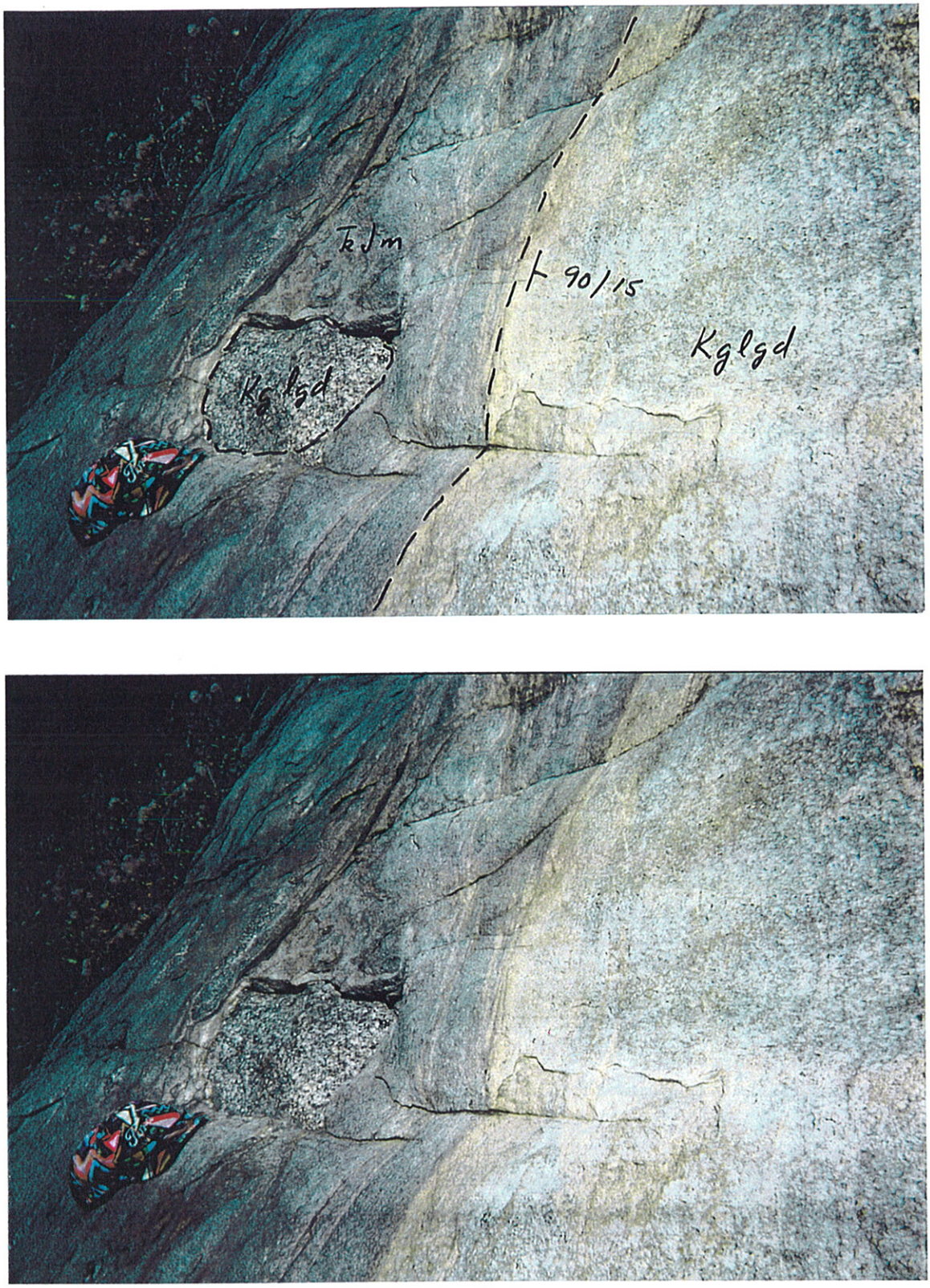


Figure 2. Contact between the leucogranodiorite (Kglgd) and the amphibolites of the metamorphic wedge (Tjm). Note that even though the contact is planar at this scale, it is not brecciated (hence, it is not a fault). In addition, notice the apophysis of lecugranodiorite "poking" through the amphibolite.

Figure 3. Contact between leucogranodiorite (Kglgd) and the amphibolites of the metamorphic wedge (Tjm). Note pegmatitic dike of Kglgd extending from the contact into the metamorphic unit, which demonstrates that the contact is not a fault.

Figure 4. Contact between leucogranodiorite (Kglgd) and the amphibolites of the metamorphic wedge (Tjm). Note that the contact is not planar, and hence not a fault. Note also that the contact could not be reasonably projected to the right of the ponds because of the outcrop of leucogranodiorite in the second plane.

Figure 5. Contact between the tonalite (Kbt) and the amphibolites of the metamorphic wedge (Tjm). Note the irregular nature of the contact, which demonstrates that the contact is not a fault.

Figure 6. Contact between the tonalite (Kbt) and the amphibolites of the metamorphic wedge (Tjm). Note the irregular, intricate nature of the contact, which demonstrates that the contact is not a fault.

Figure 7. Contact between the tonalite (Kbt) and the amphibolites of the metamorphic wedge (Tjm). Note the irregular, intricate nature of the contact, which demonstrates that the contact is not a fault.

Figure 8. Migmatitic banding in the amphibolites of the metamorphic wedge (Tjm). Note the outcrops of leucogranodiorite (Kglgd) in the upper left, and the fact that banding dips into the slope. Mineralogical banding does not create foliation planes in the rock.

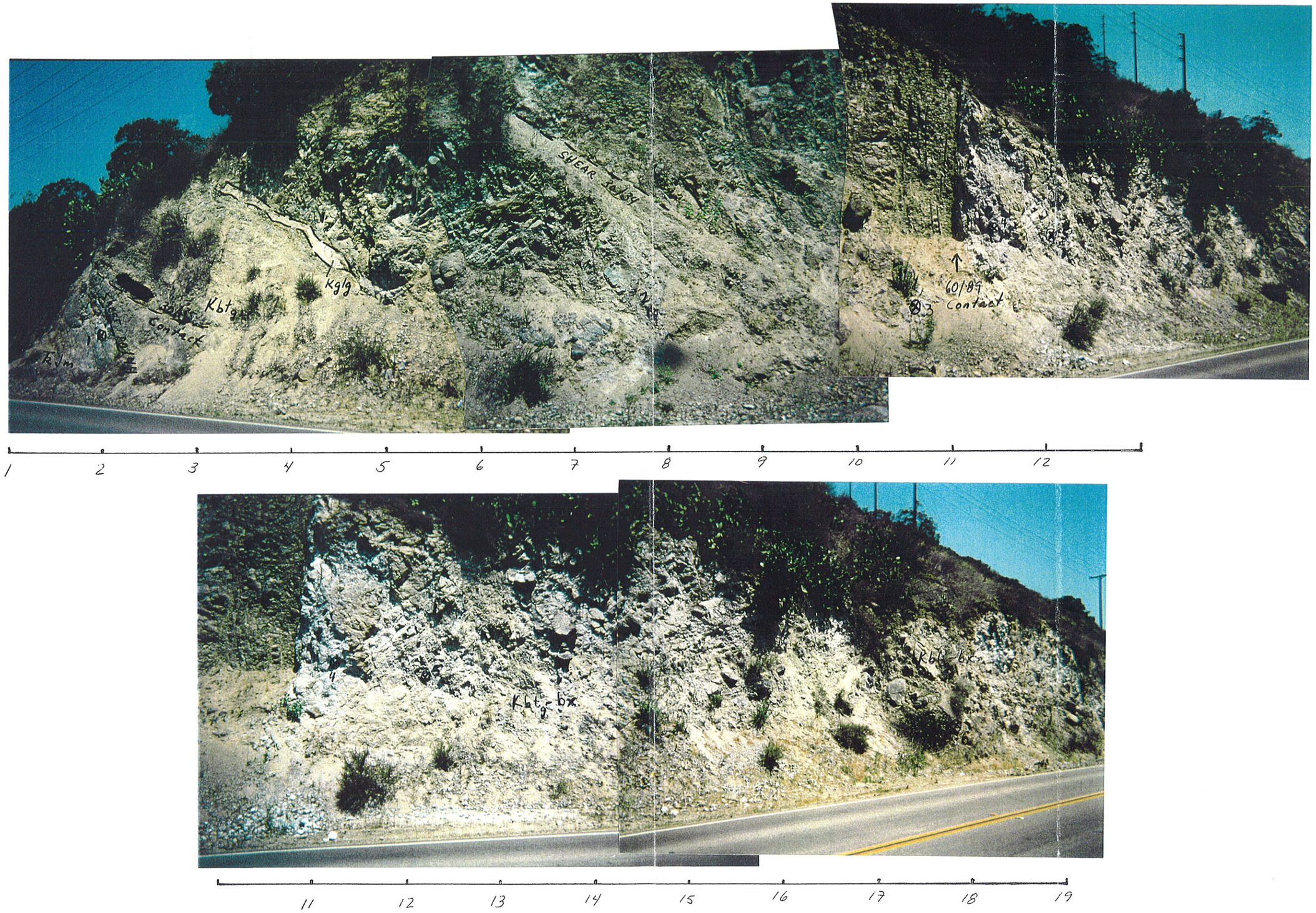


Figure 9. Photo montage of the outcrop created by the road cut of Highway 76 across the southeast corner of Section 29.

Figure 10. Stereopair of the contact between weathered, vertically-fractured gabbro on the left, and the intrusive gabbroic breccia on the right.

Figure 11. Direction in which the contact of the intrusive breccia would project toward Gregory Mountain.

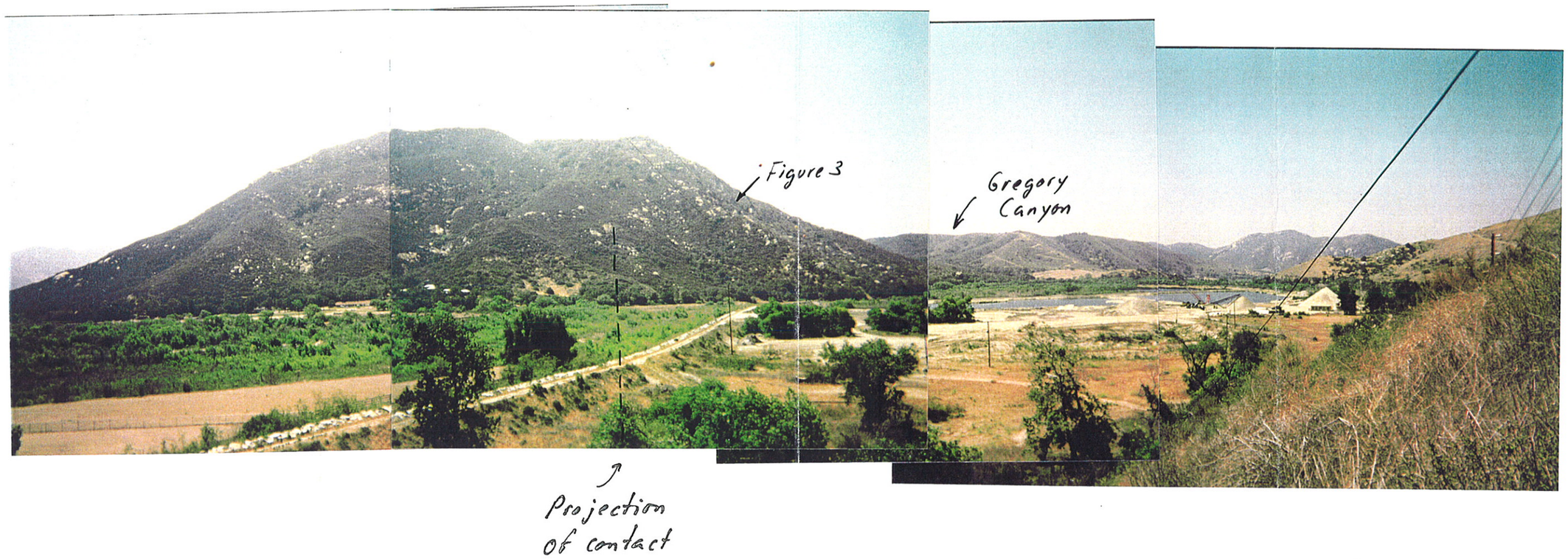


Figure 12. Photo montage showing the considerable distance between the projection of the contact of the intrusive breccia and Gregory Canyon itself.

ATTACHMENT 4

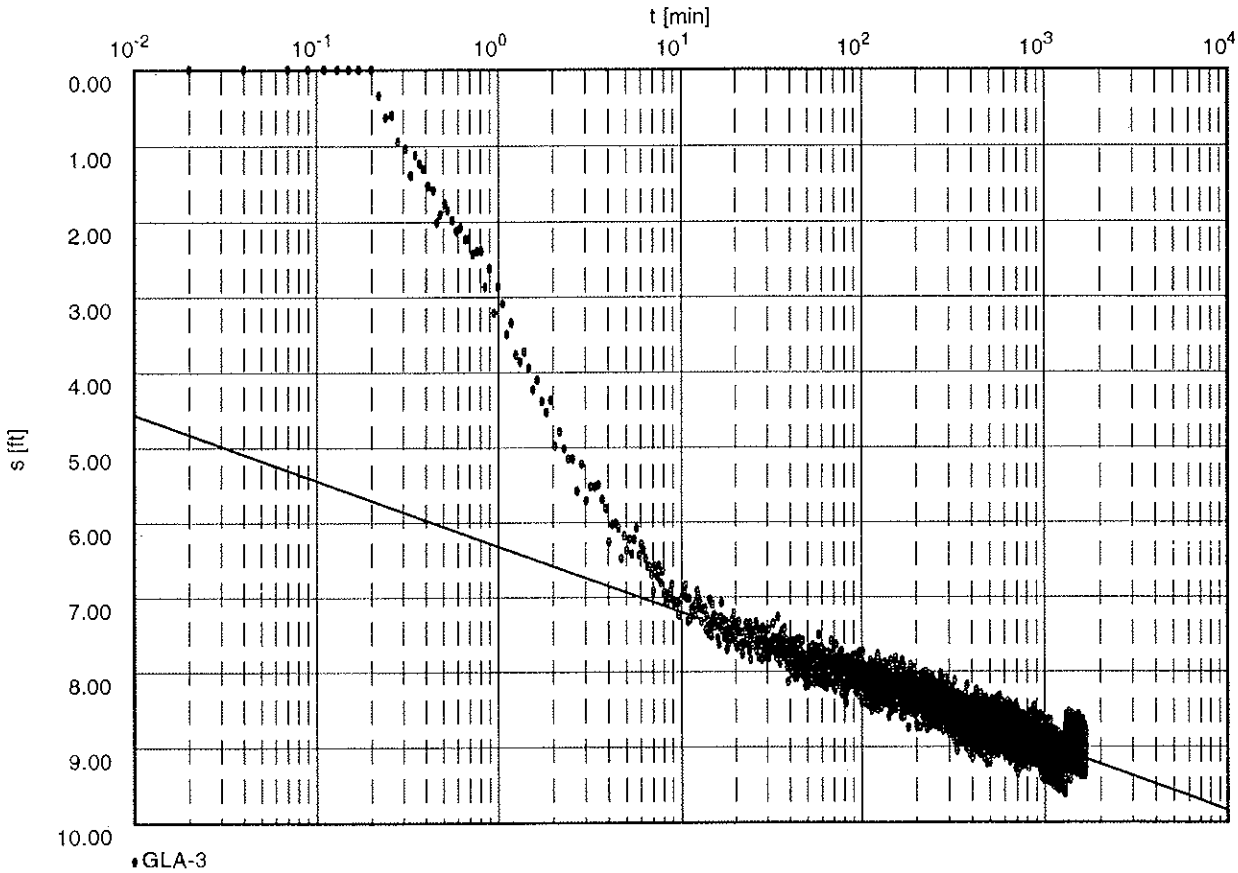
PUMPING TEST RESULTS (CURVES)

APPENDIX A

PUMP TEST #1 DATA

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	



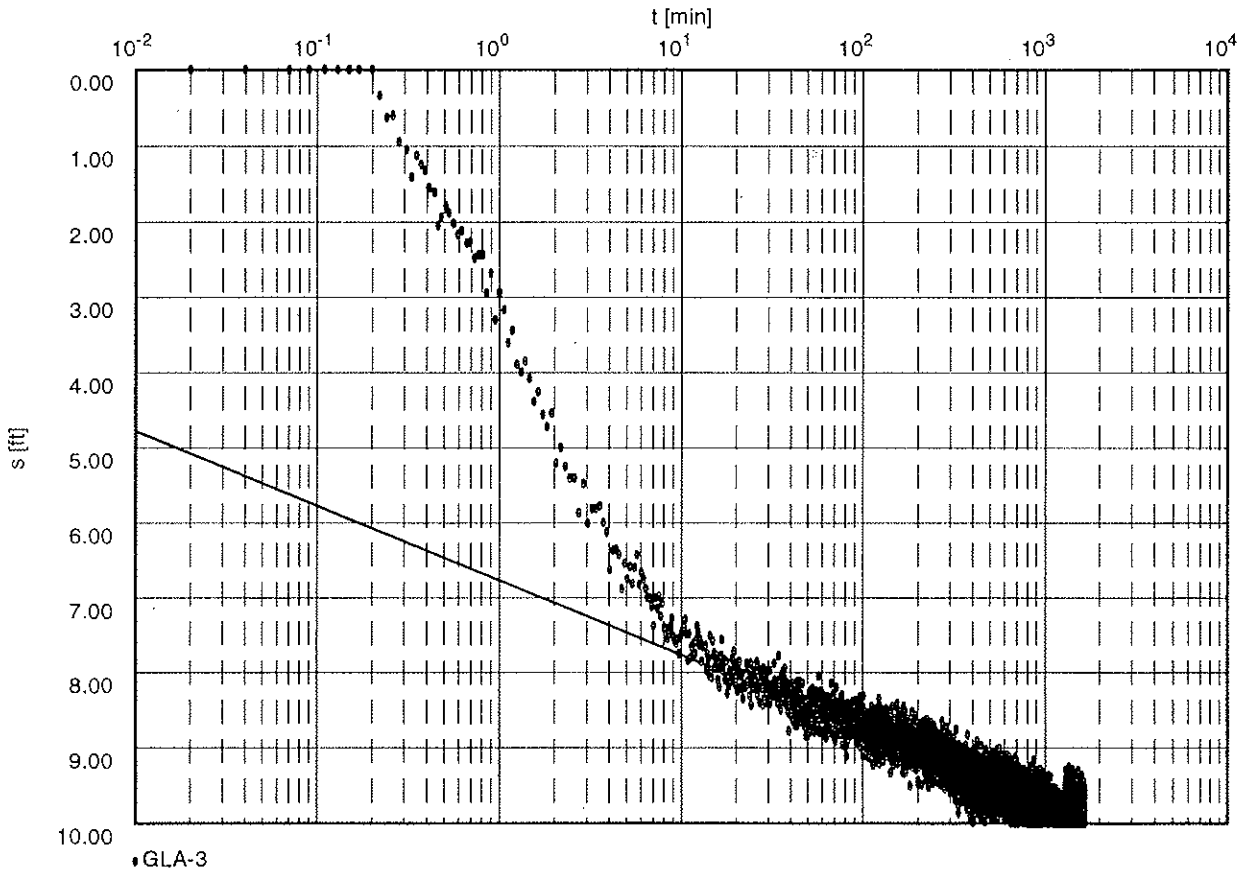
Transmissivity [ft²/min]: 2.77×10^{-1}

Hydraulic conductivity [ft/min]: 4.62×10^{-3}

Aquifer thickness [ft]: 60.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000 | Page 1 Project: Gregory Canyon Pump Test Evaluated by: wbl

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	



Transmissivity [ft²/min]: 2.45×10^{-1}

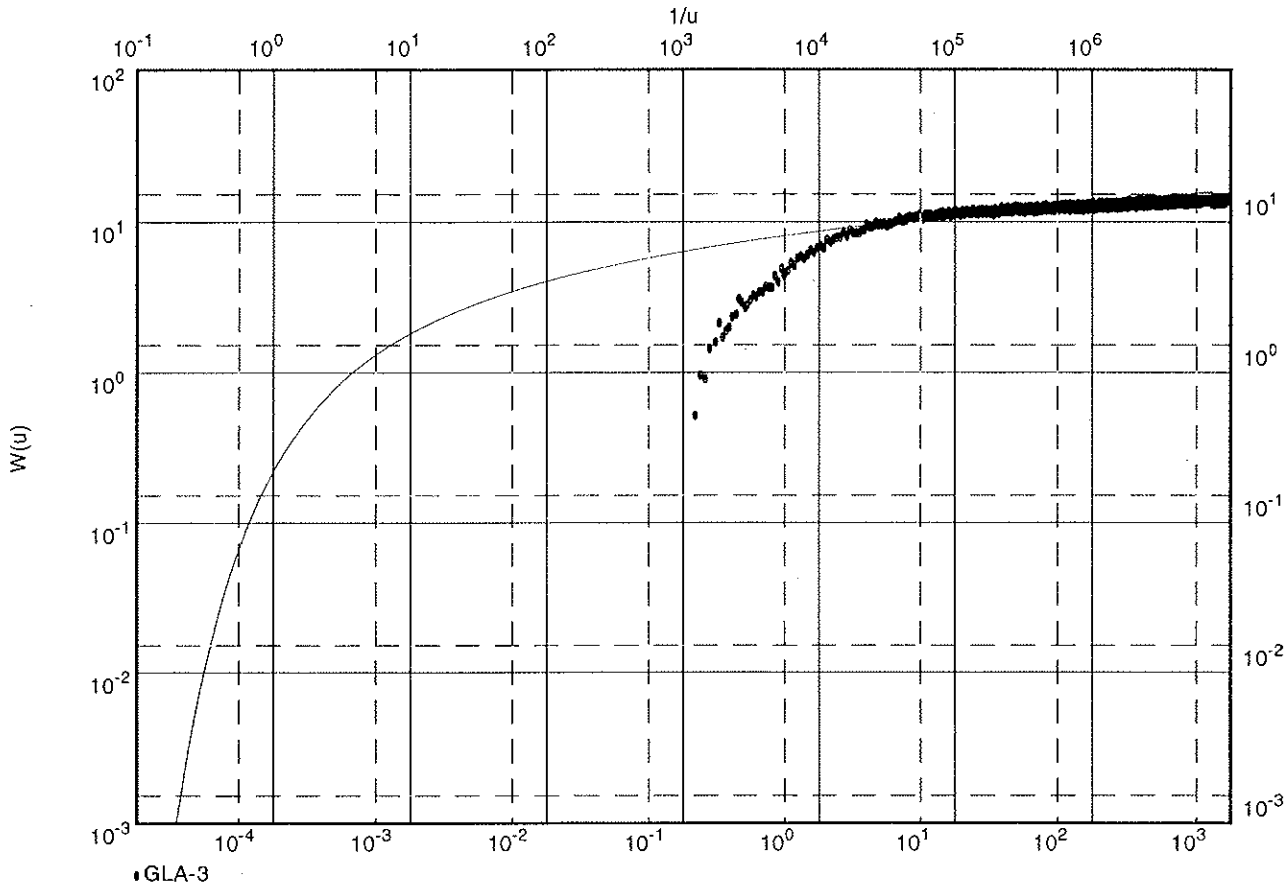
Hydraulic conductivity [ft/min]: 4.09×10^{-3}

Aquifer thickness [ft]: 60.00

Storativity: 8.87×10^{-8}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	



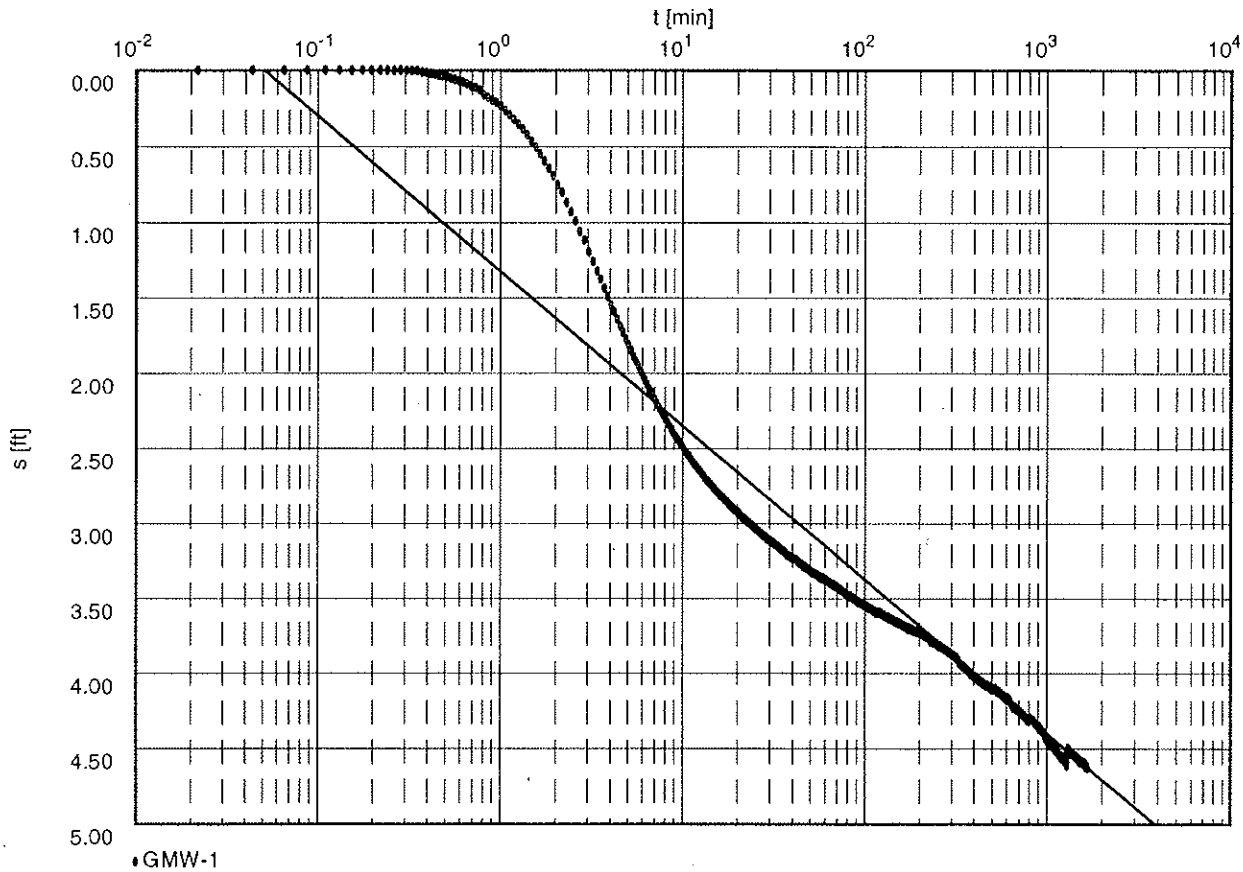
Transmissivity [ft²/min]: 1.61×10^{-1}

Hydraulic conductivity [ft/min]: 2.69×10^{-3}

Aquifer thickness [ft]: 60.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000 | Page 1 Project: Gregory Canyon Landfill Evaluated by: wbl

Pumping Test No. 1	Test conducted on: 28.11.2000
GMW-1 (observation)	
Discharge 10.00 U.S.gal/min	



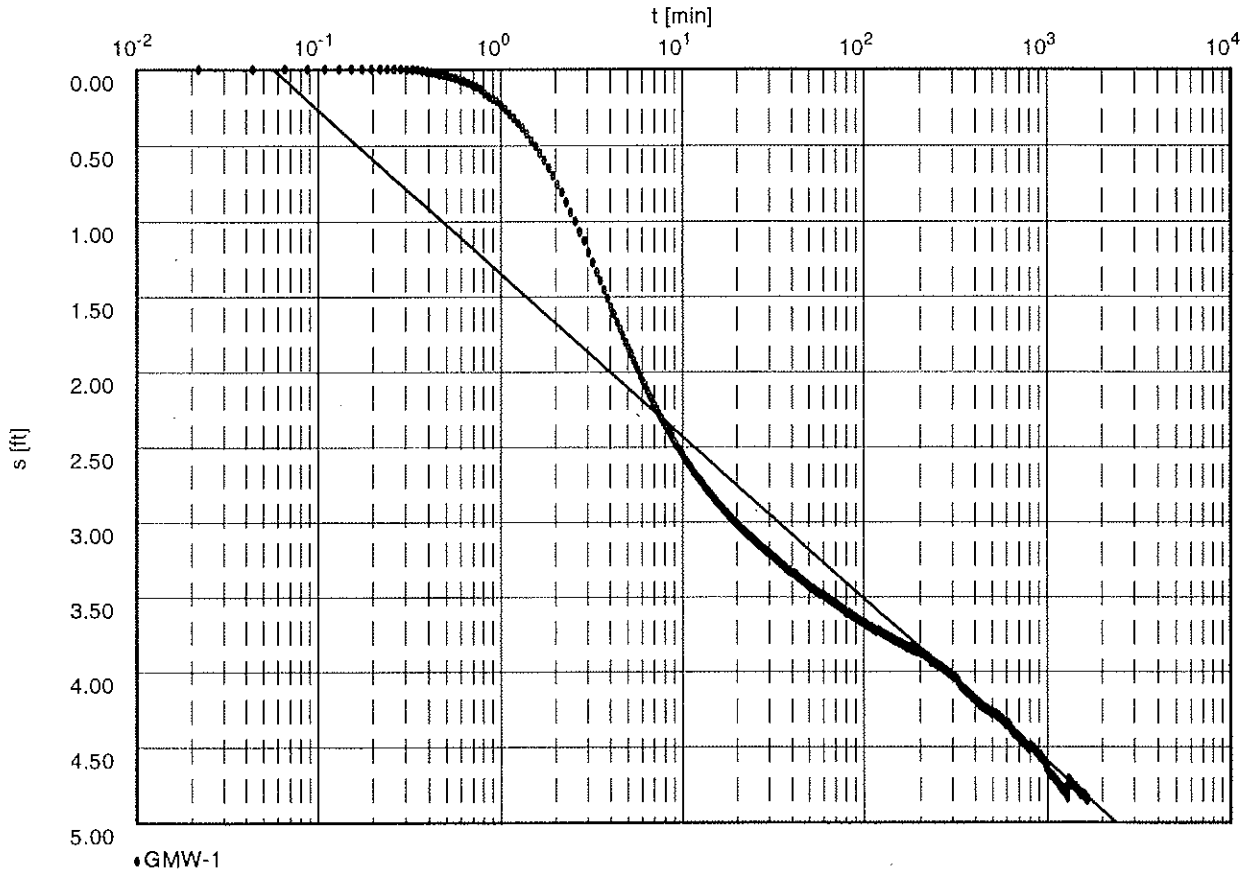
Transmissivity [ft²/min]: 2.38×10^{-1}

Hydraulic conductivity [ft/min]: 4.59×10^{-3}

Aquifer thickness [ft]: 52.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GMW-1 (observation)	
Discharge 10.00 U.S.gal/min	



Transmissivity [ft²/min]: 2.26×10^{-1}

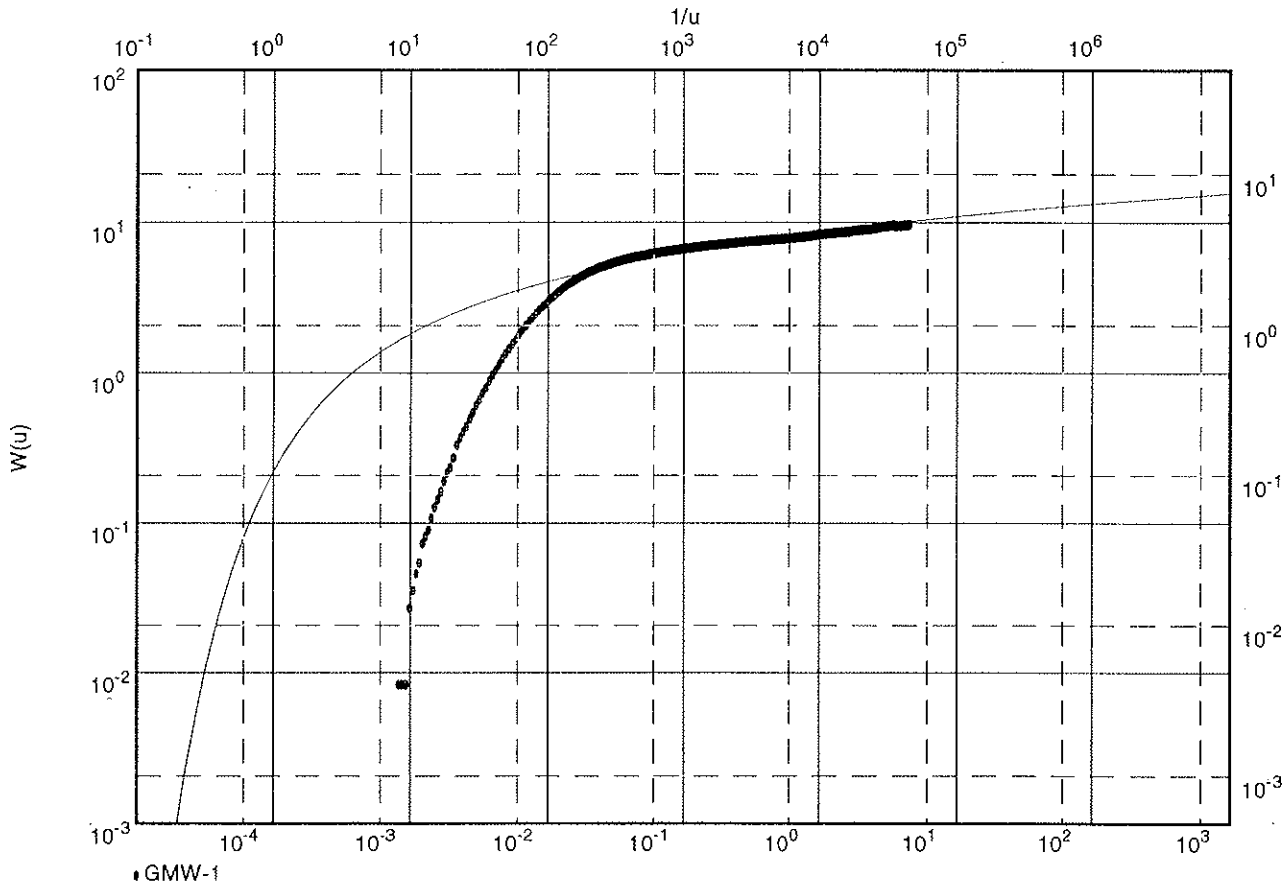
Hydraulic conductivity [ft/min]: 4.35×10^{-3}

Aquifer thickness [ft]: 52.00

Storativity: 1.28×10^{-4}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GMW-1 (observation)	
Discharge 10.00 U.S.gal/min	



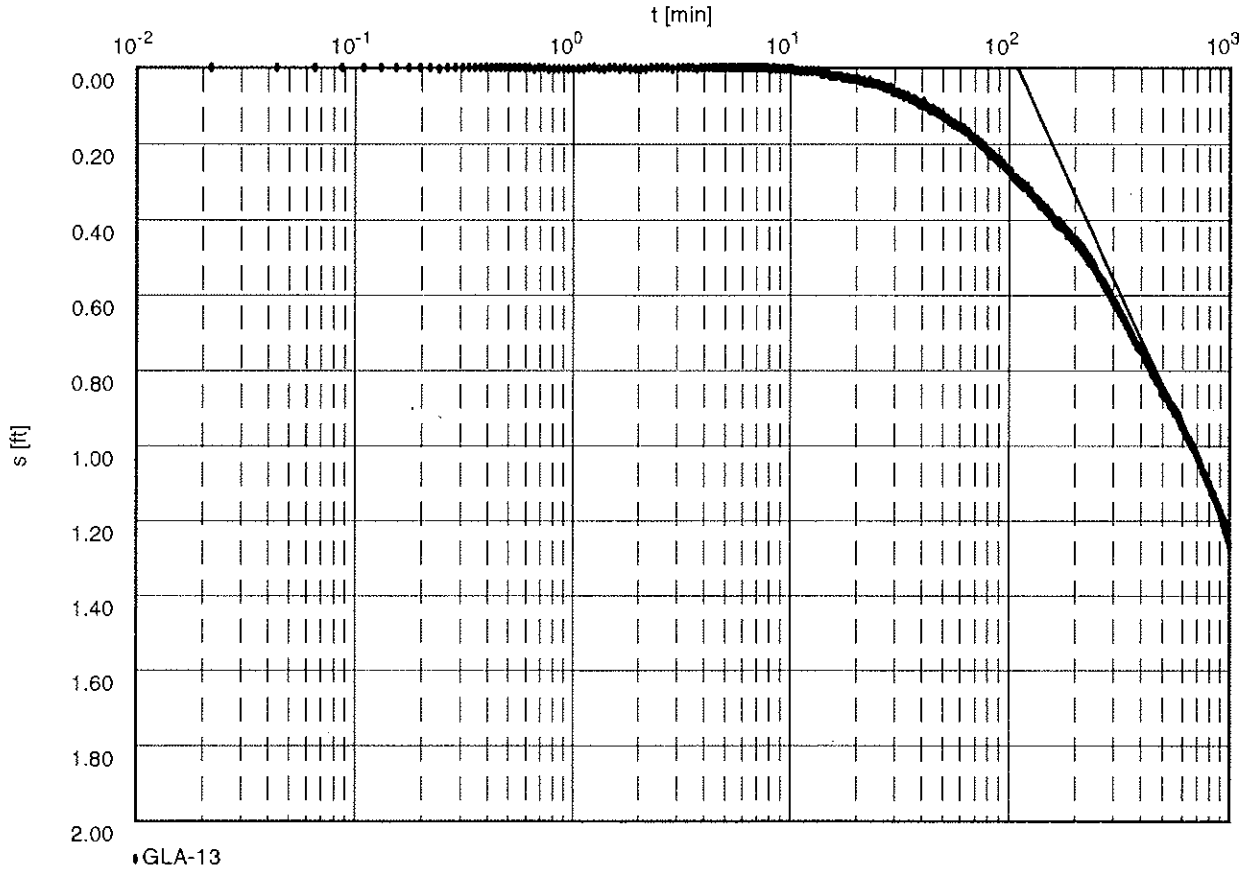
Transmissivity [ft²/min]: 2.20×10^{-1}

Hydraulic conductivity [ft/min]: 4.23×10^{-3}

Aquifer thickness [ft]: 52.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-13 (observation)	
Discharge 10.00 U.S.gal/min	



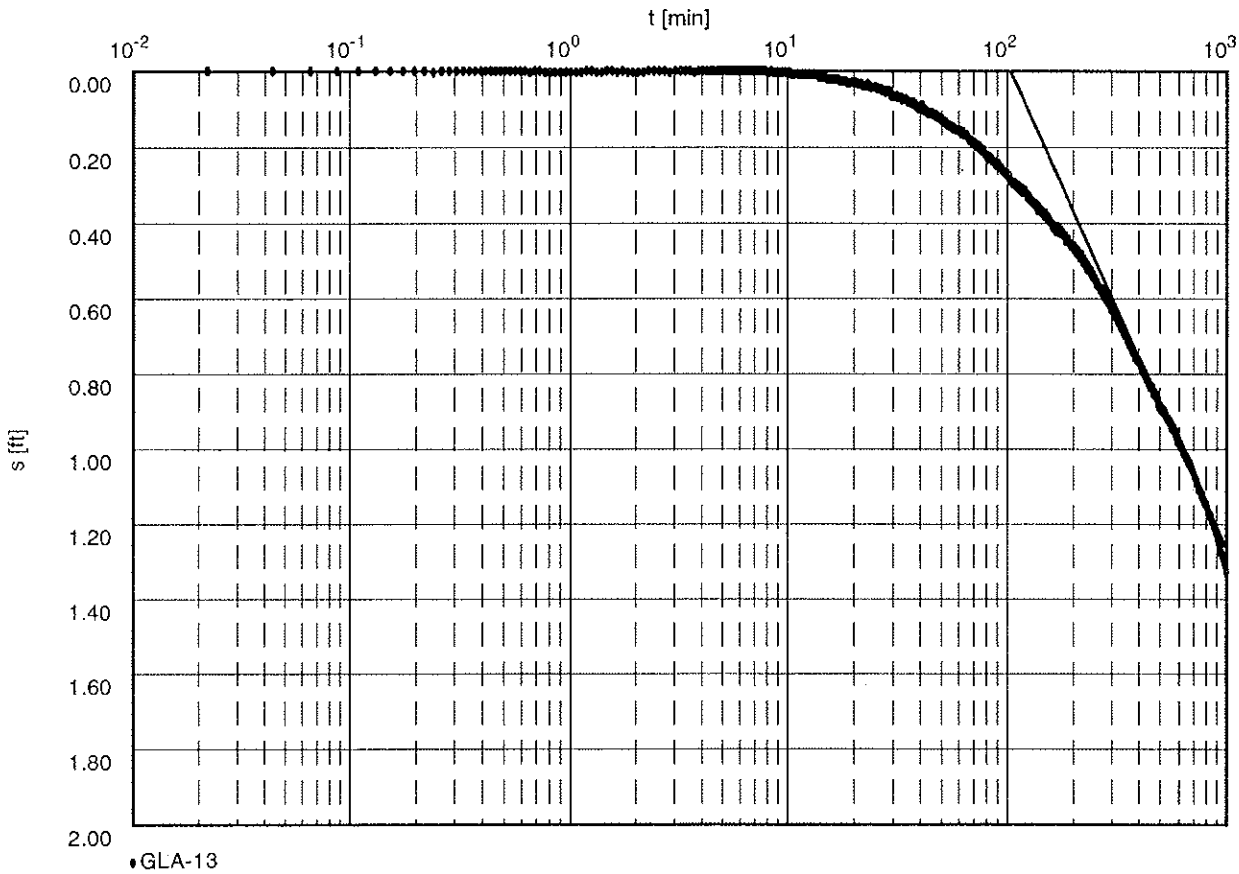
Transmissivity [ft²/min]: 1.92×10^{-1}

Hydraulic conductivity [ft/min]: 1.33×10^{-2}

Aquifer thickness [ft]: 14.50

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000 Page 1 Project: Gregory Canyon Pump Test Evaluated by: wbl

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-13 (observation)	
Discharge 10.00 U.S.gal/min	

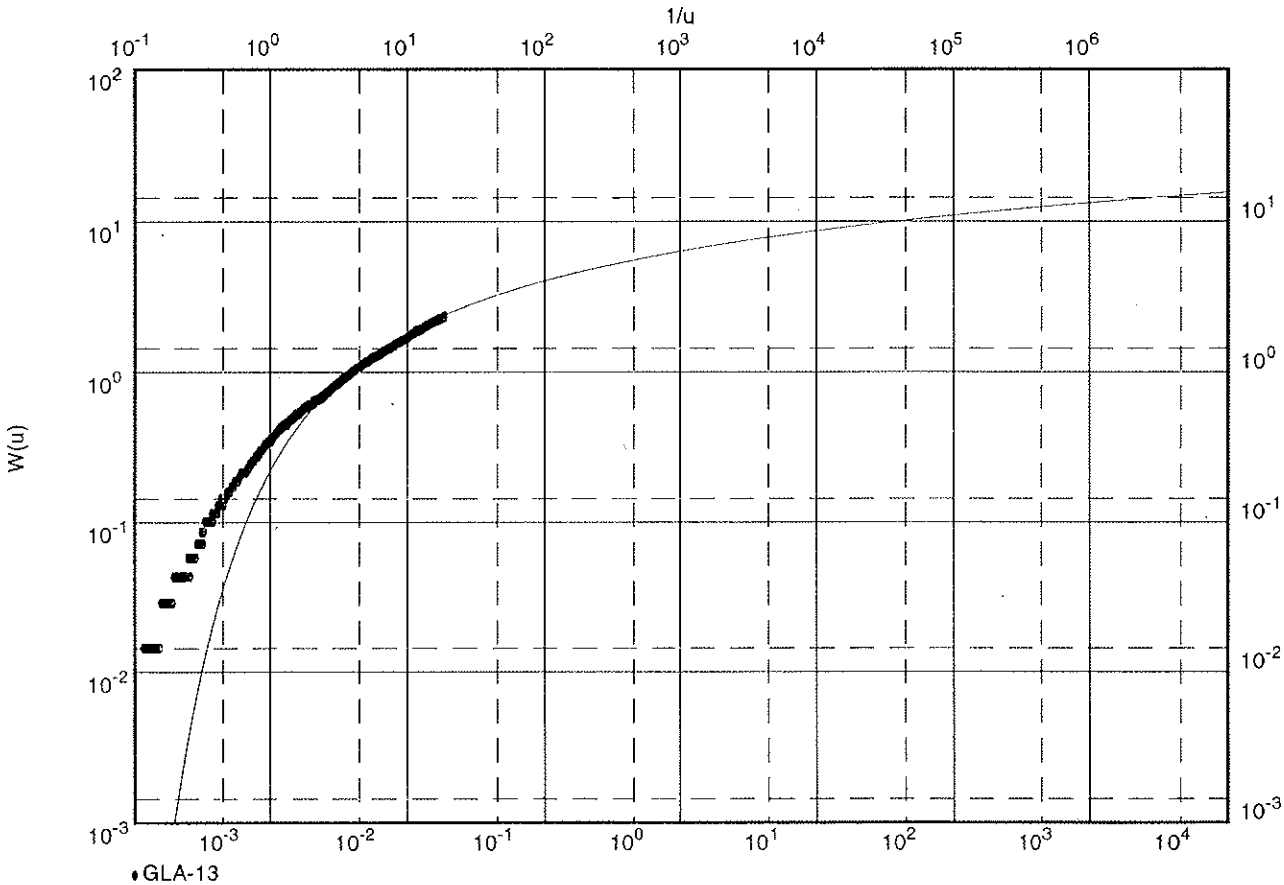


Transmissivity [ft²/min]: 1.90×10^{-1}

Storativity: 1.10×10^{-3}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-13 (observation)	
Discharge 10.00 U.S.gal/min	



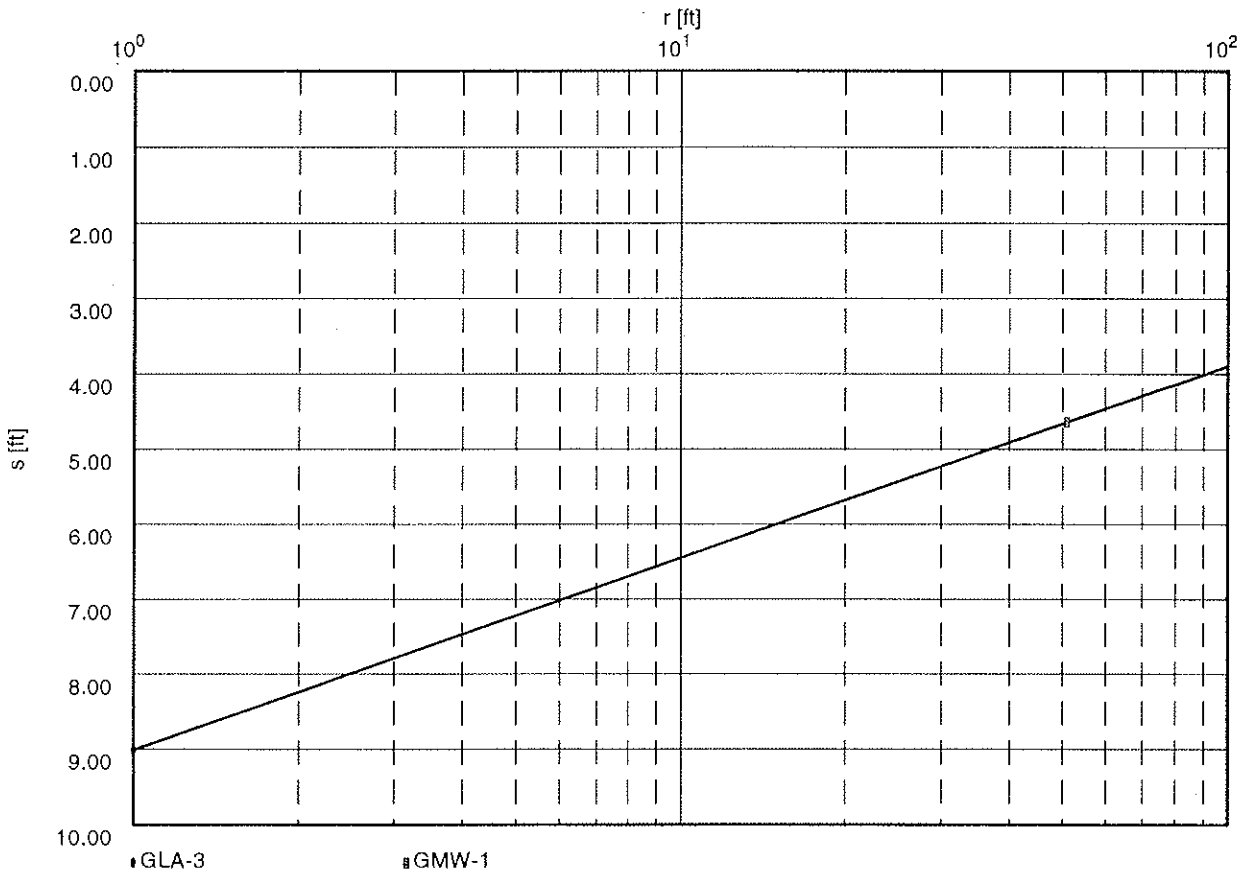
Transmissivity [ft²/min]: 1.52×10^{-1}

Hydraulic conductivity [ft/min]: 1.05×10^{-2}

Aquifer thickness [ft]: 14.50

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Distance-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	Analysis at time (t) 1600.00 min



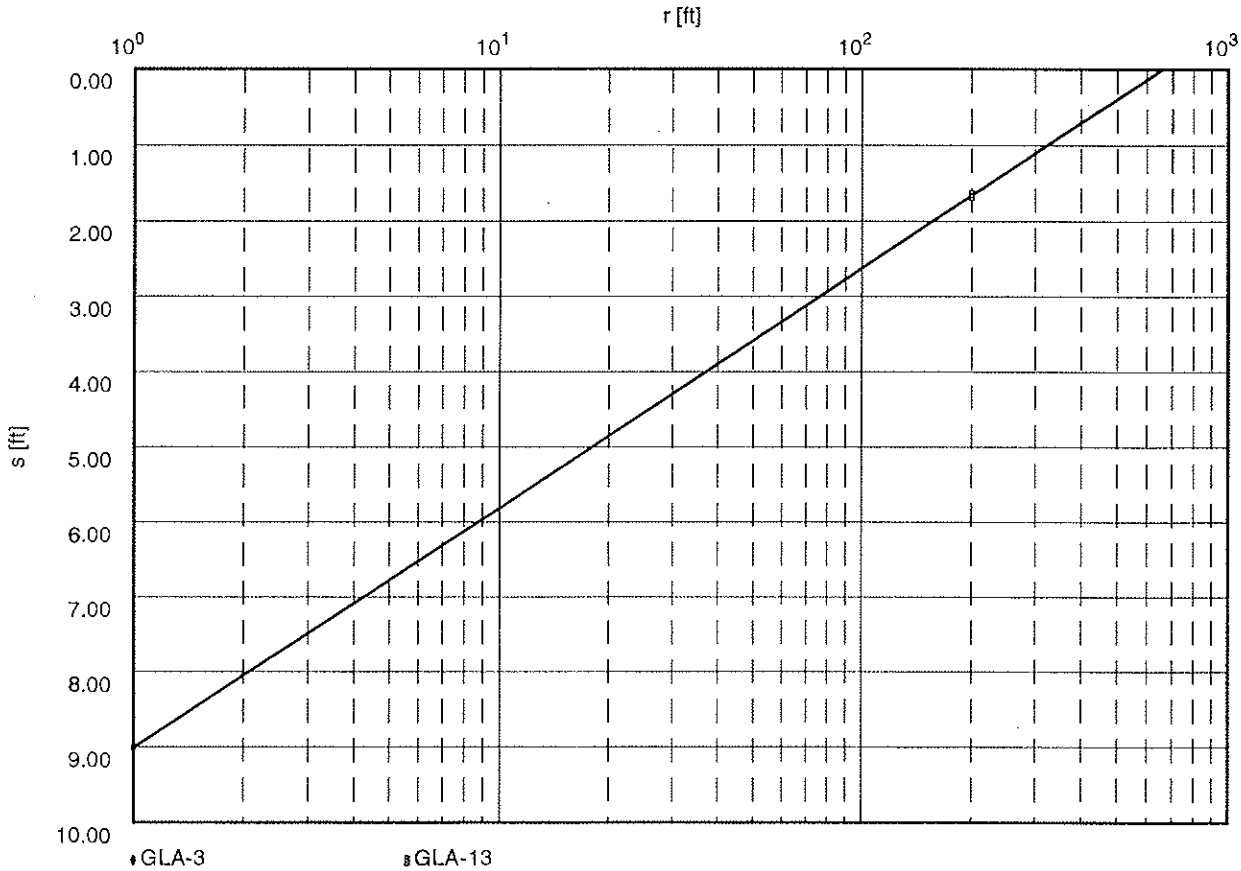
Transmissivity [ft²/min]: 1.91×10^{-1}

Hydraulic conductivity [ft/min]: 3.18×10^{-3}

Aquifer thickness [ft]: 60.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Distance-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000 | Page 1 Project: Gregory Canyon Pump Test Evaluated by: wbl

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	Analysis at time (t) 1600.00 min



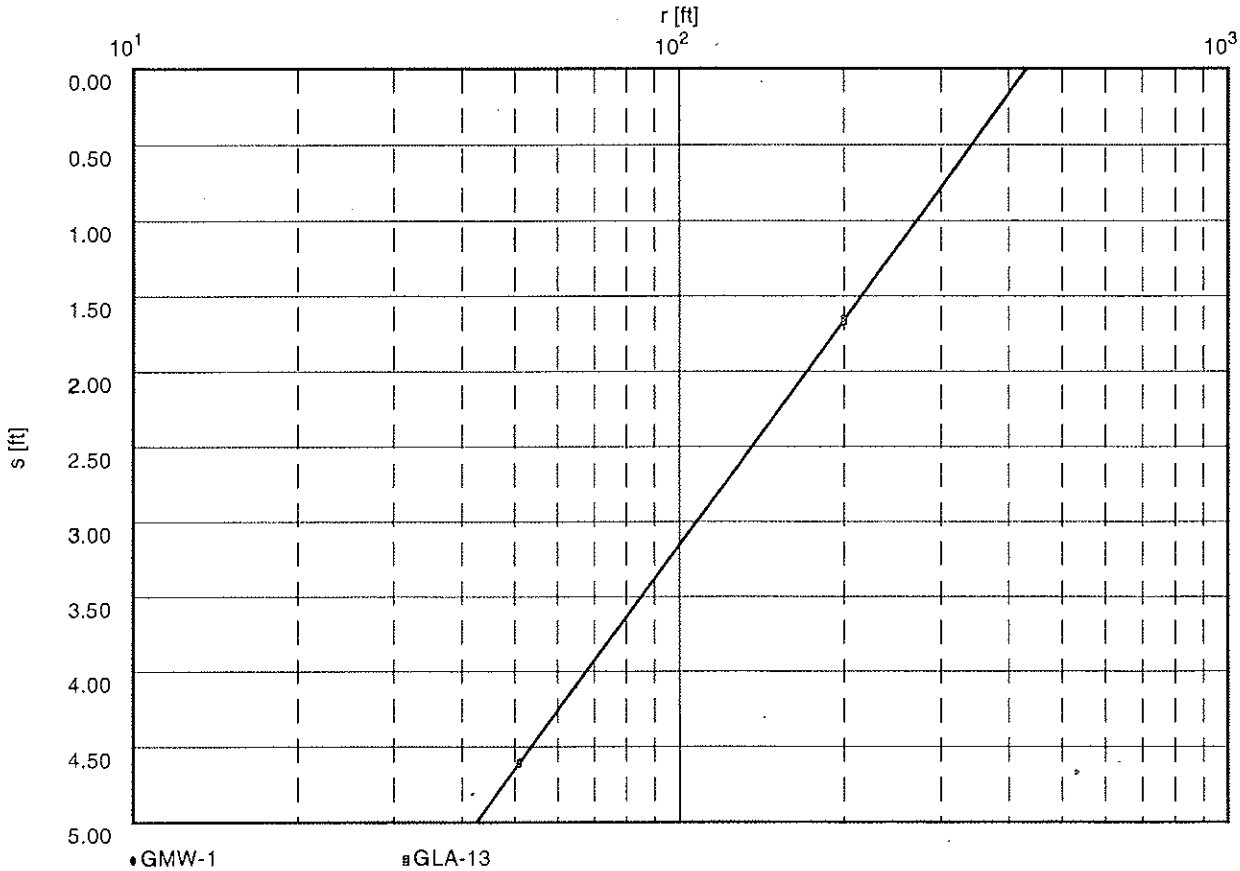
Transmissivity [ft²/min]: 1.53×10^{-1}

Hydraulic conductivity [ft/min]: 2.55×10^{-3}

Aquifer thickness [ft]: 60.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Distance-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	Analysis at time (t) 1600.00 min



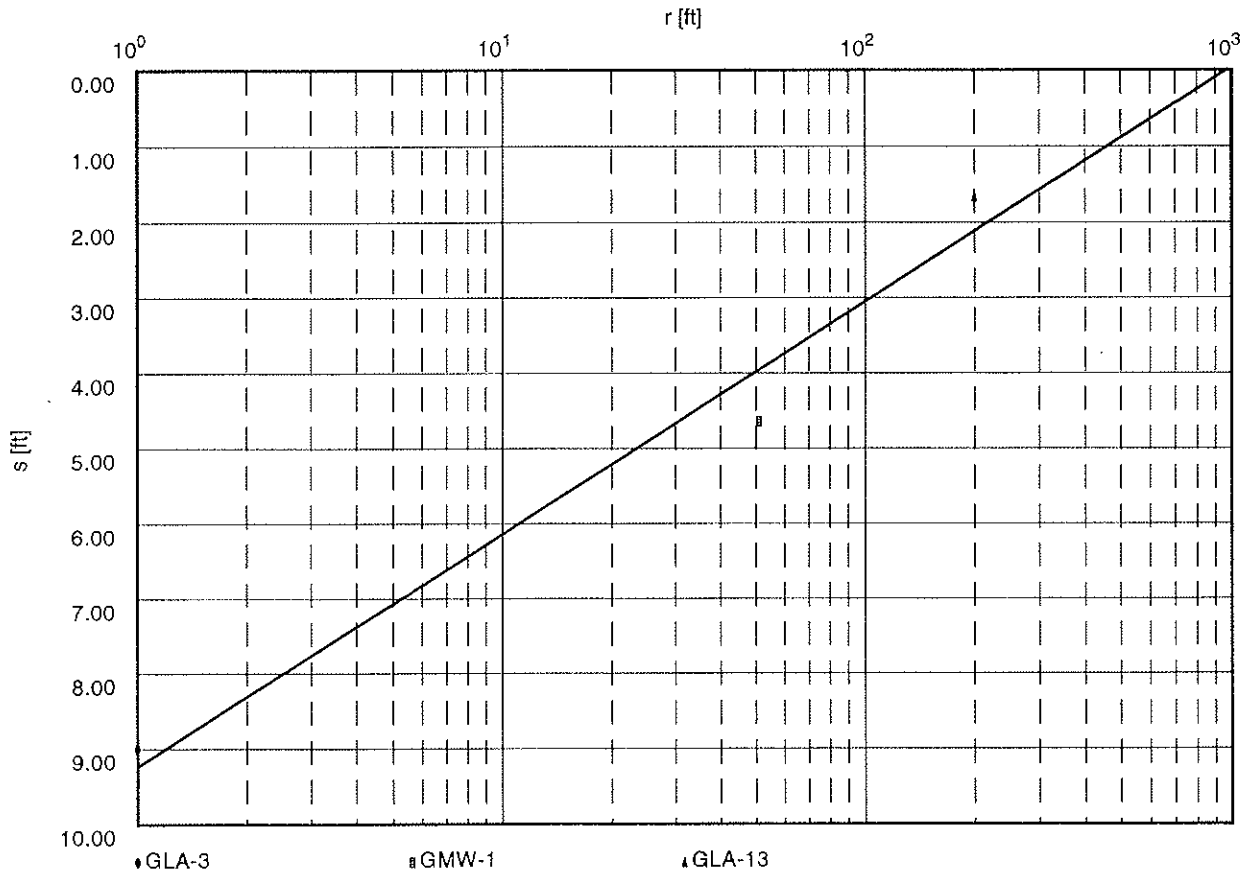
Transmissivity [ft²/min]: 9.84×10^{-2}

Hydraulic conductivity [ft/min]: 1.89×10^{-3}

Aquifer thickness [ft]: 52.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Distance-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 1	Test conducted on: 28.11.2000
GLA-3 (pumping well)	
Discharge 10.00 U.S.gal/min	Analysis at time (t) 1600.00 min



Transmissivity [ft²/min]: 1.58×10^{-1}

Hydraulic conductivity [ft/min]: 2.63×10^{-3}

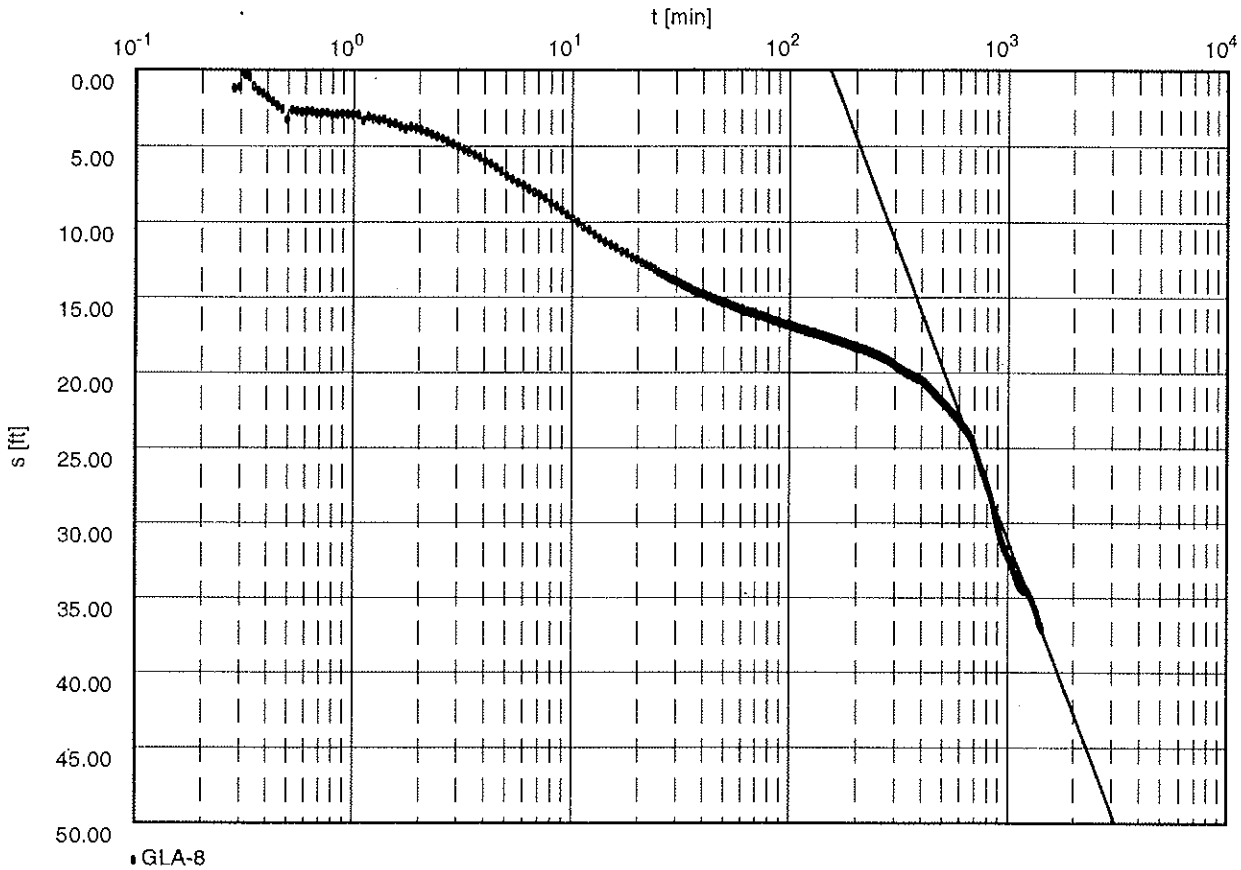
Aquifer thickness [ft]: 60.00

APPENDIX B

PUMP TEST #2 DATA

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	



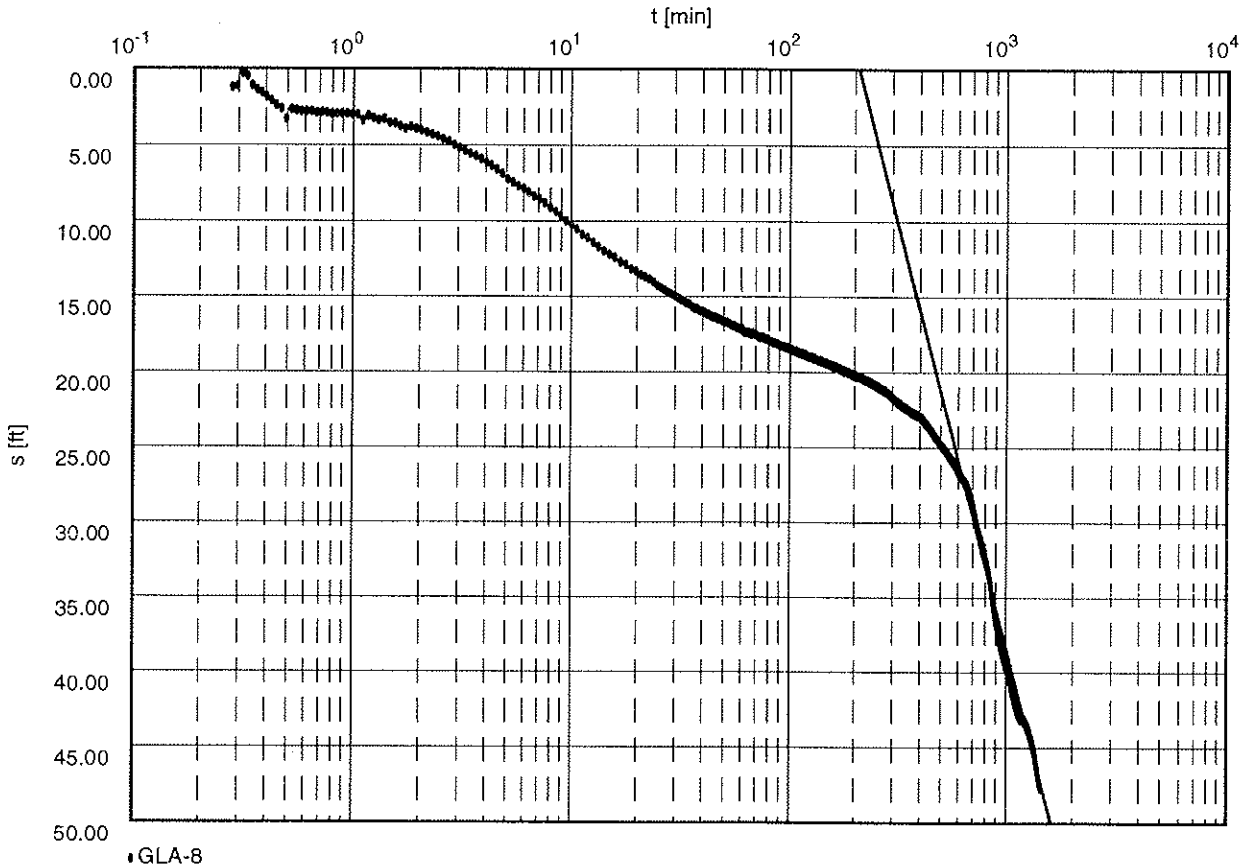
Transmissivity [ft²/min]: 1.28×10^{-3}

Hydraulic conductivity [ft/min]: 1.18×10^{-5}

Aquifer thickness [ft]: 108.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	

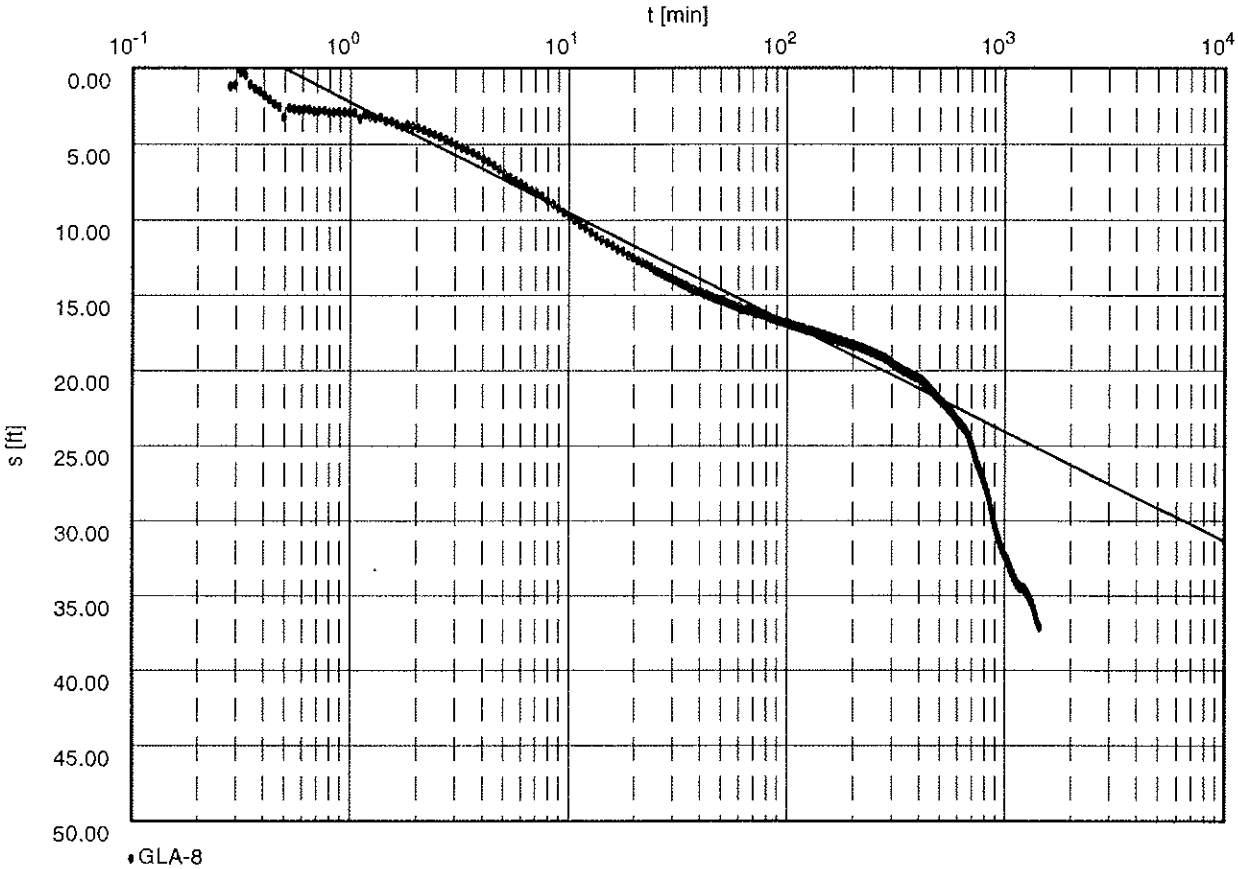


Transmissivity [ft²/min]: 8.68×10^{-4}

Storativity: 4.08×10^{-1}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	



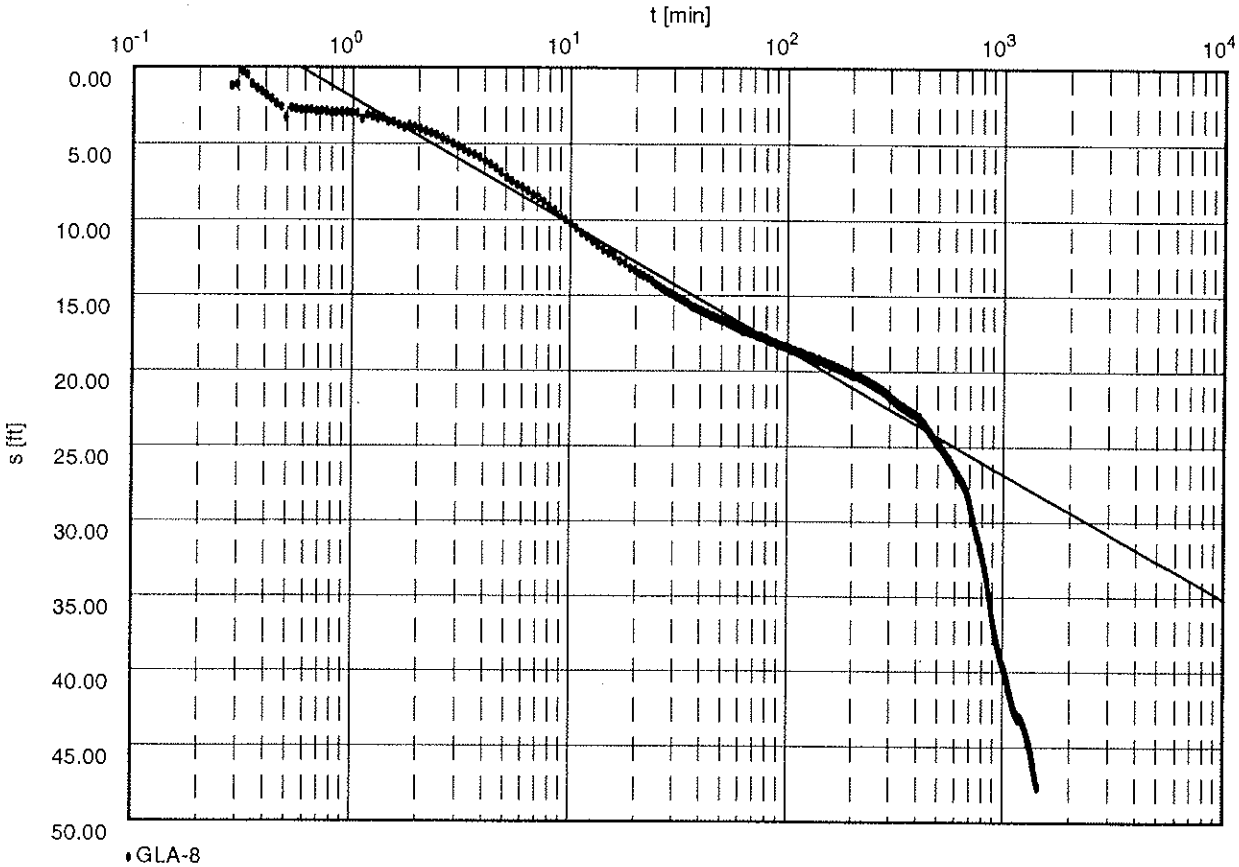
Transmissivity [ft²/min]: 6.72×10^{-3}

Hydraulic conductivity [ft/min]: 6.22×10^{-5}

Aquifer thickness [ft]: 108.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	

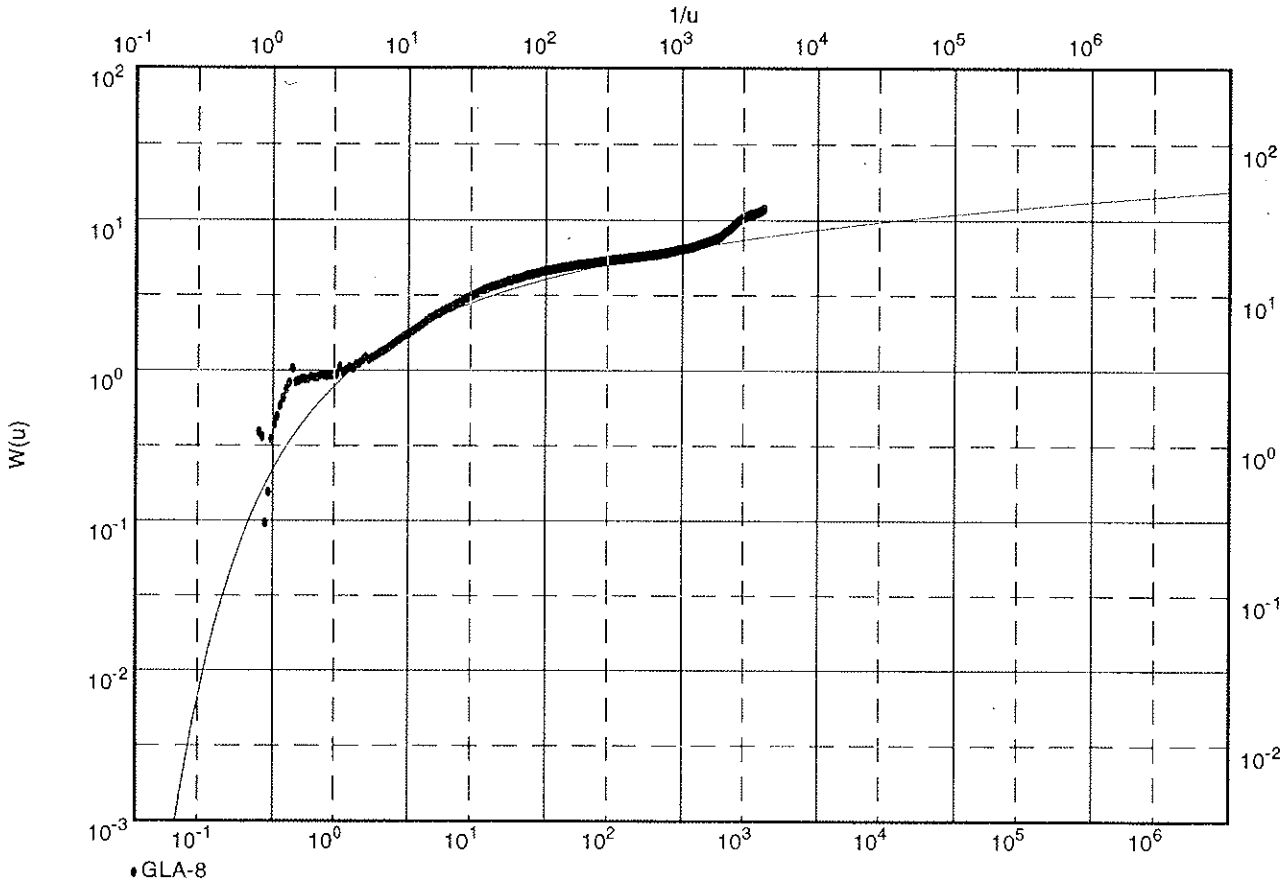


Transmissivity [ft²/min]: 5.90×10^{-3}

Storativity: 7.63×10^{-3}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Landfill	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	



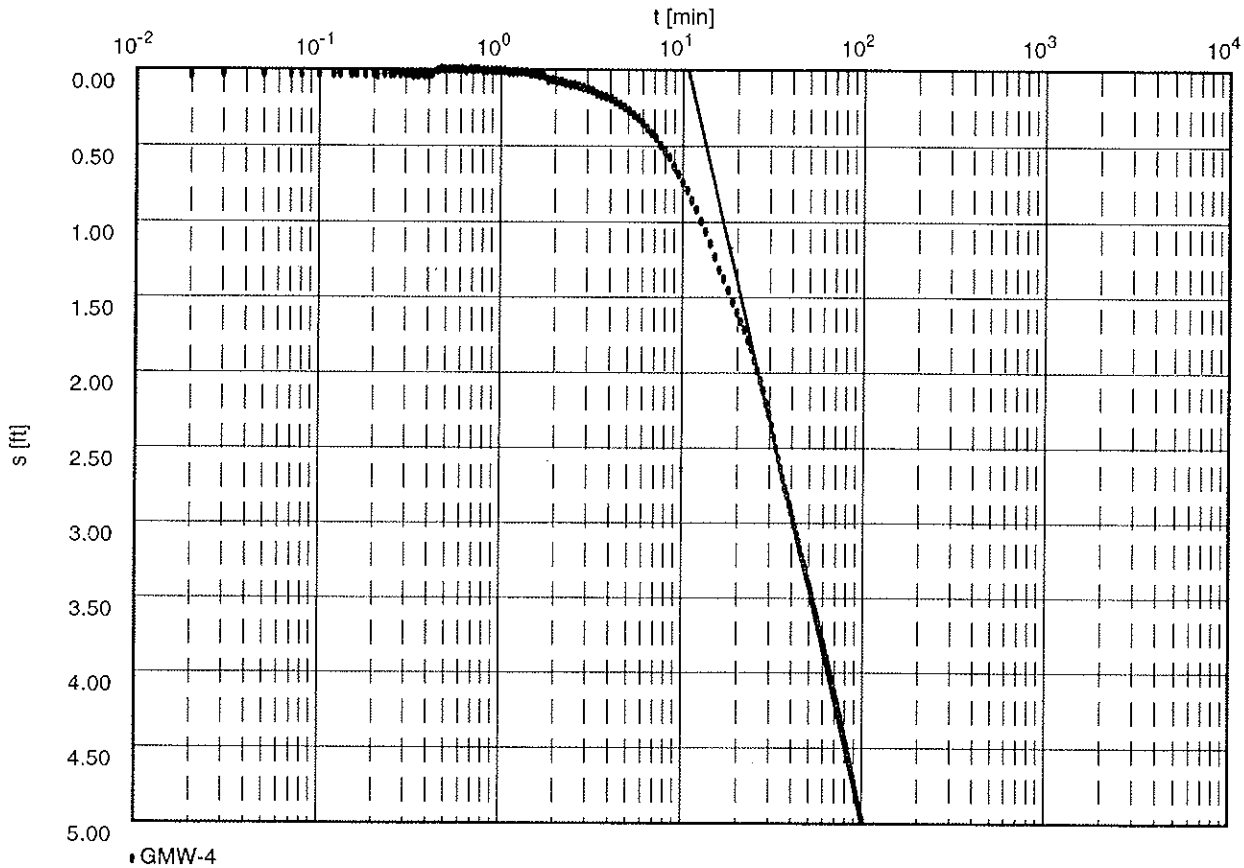
Transmissivity [ft²/min]: 6.72×10^{-3}

Hydraulic conductivity [ft/min]: 6.22×10^{-5}

Aquifer thickness [ft]: 108.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000 | Page 1 Project: Gregory Canyon Pump Test Evaluated by: wbl

Pumping Test No. 2	Test conducted on: 29.11.2000
GMW-4 (observation)	
Discharge 2.00 U.S.gal/min	



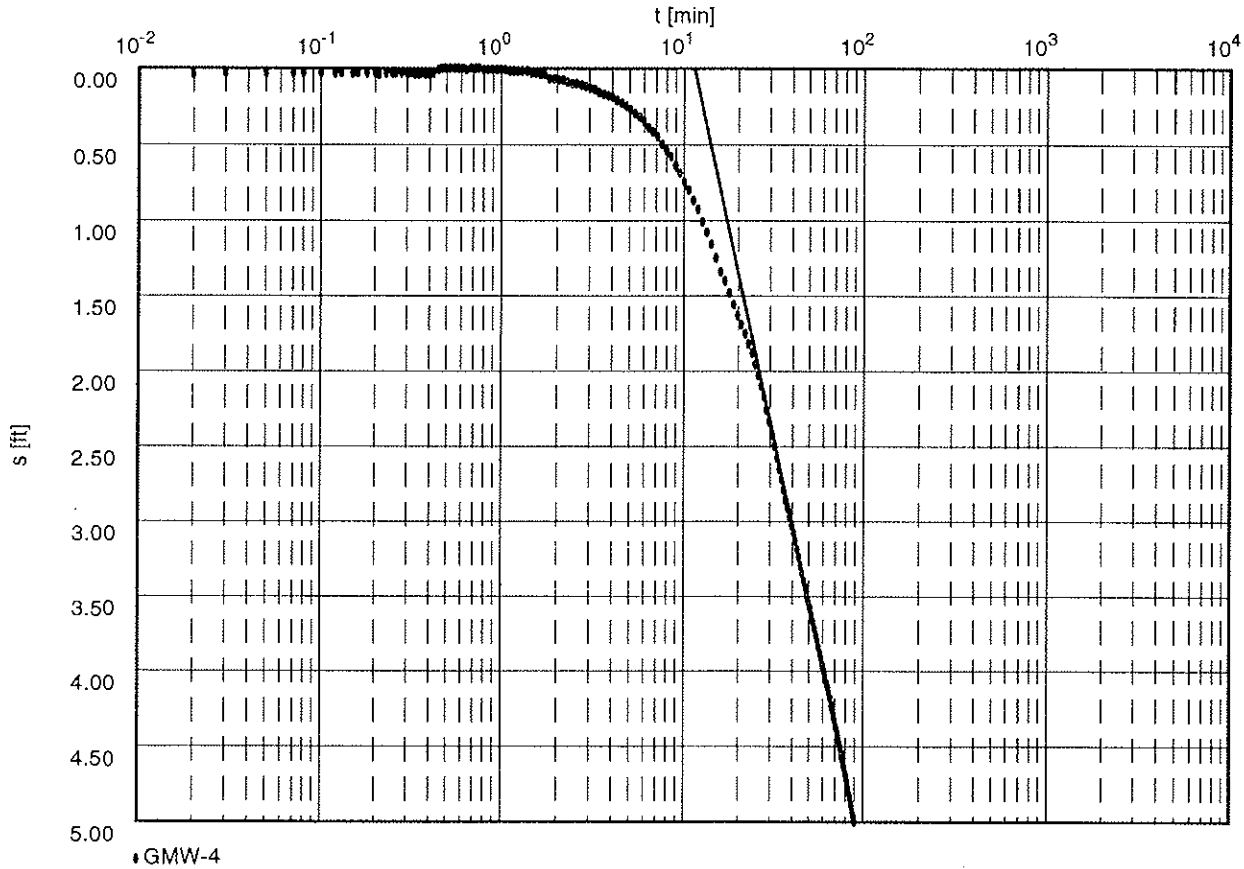
Transmissivity [ft²/min]: 9.47×10^{-3}

Hydraulic conductivity [ft/min]: 2.06×10^{-4}

Aquifer thickness [ft]: 46.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000 | Page 1 Project: Gregory Canyon Pump Test Evaluated by: wbl

Pumping Test No. 2	Test conducted on: 29.11.2000
GMW-4 (observation)	
Discharge 2.00 U.S.gal/min	

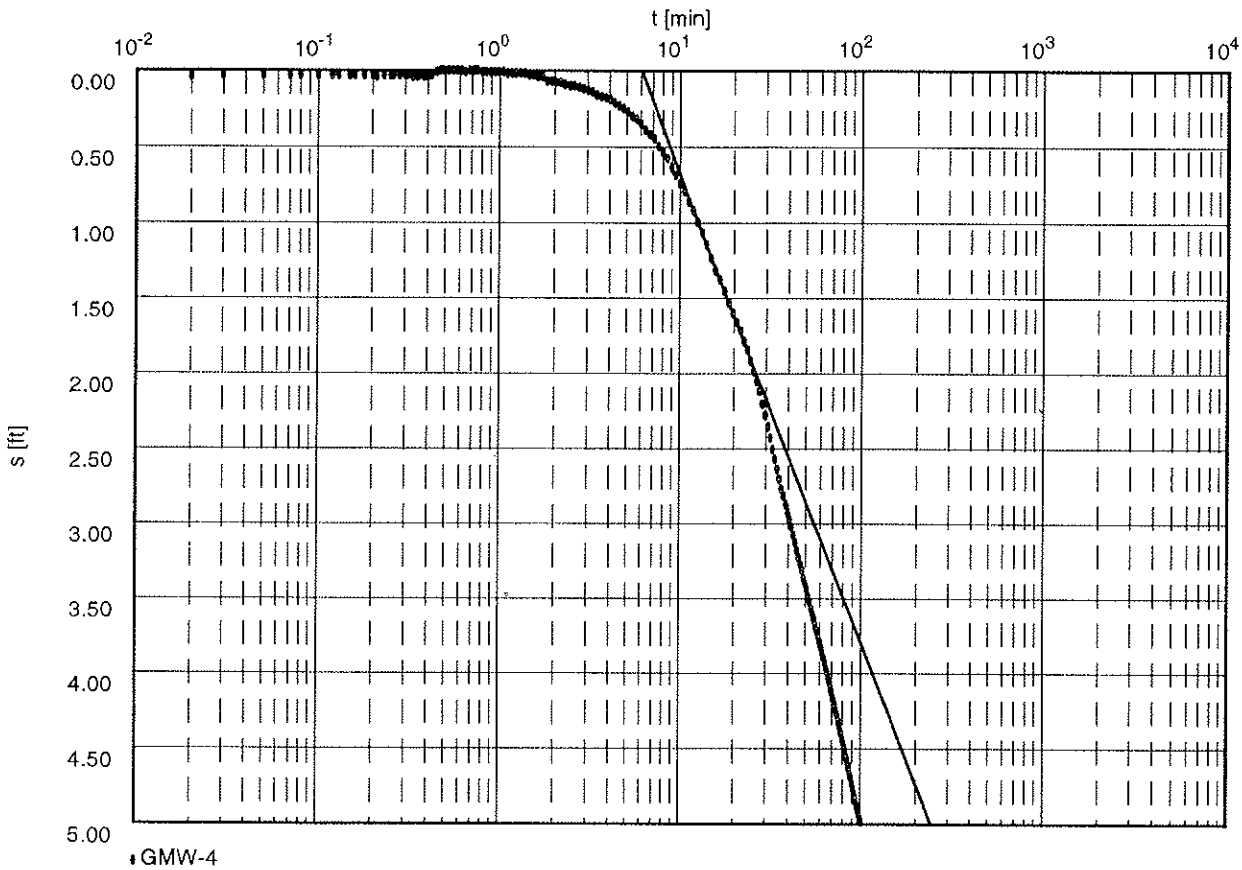


Transmissivity [ft²/min]: 8.84×10^{-3}

Storativity: 1.00×10^{-3}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GMW-4 (observation)	
Discharge 2.00 U.S.gal/min	



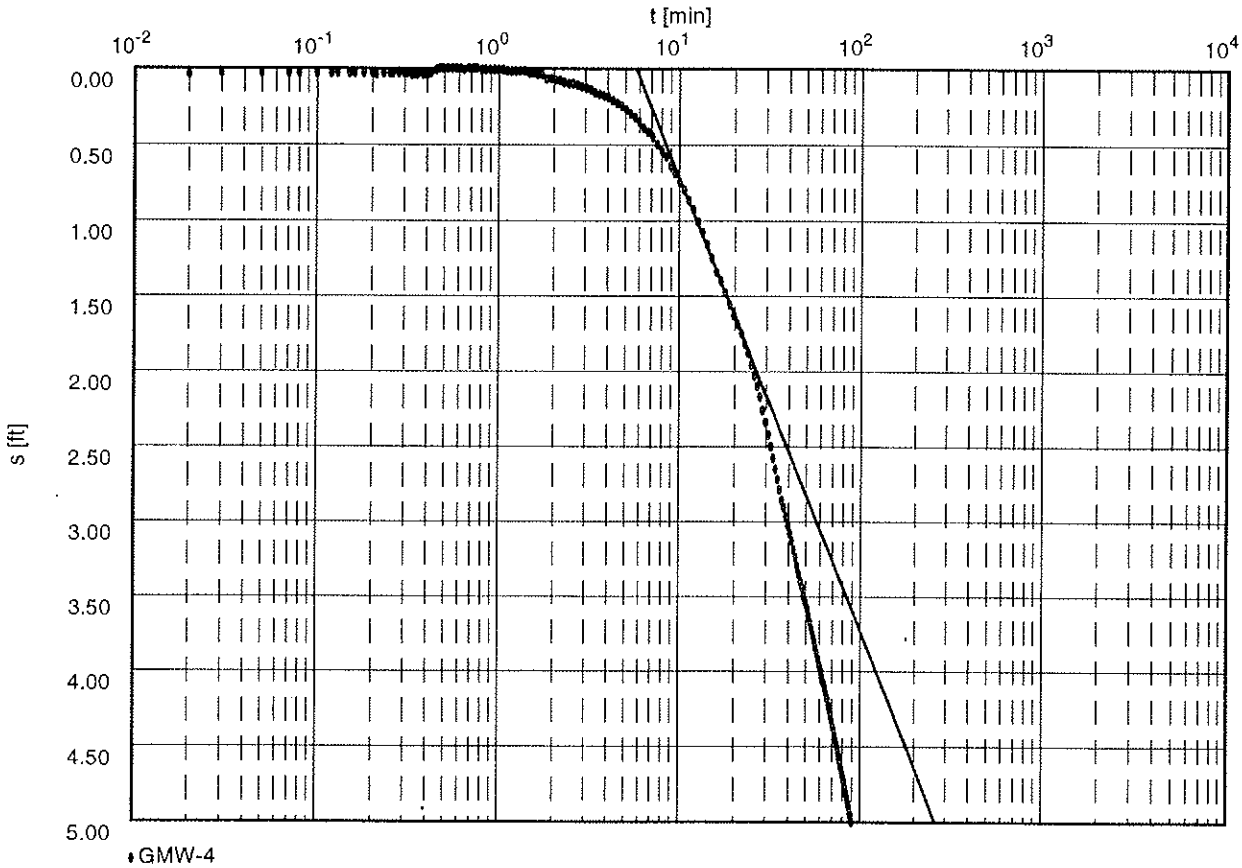
Transmissivity [ft²/min]: 1.56×10^{-2}

Hydraulic conductivity [ft/min]: 3.41×10^{-4}

Aquifer thickness [ft]: 46.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Confined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GMW-4 (observation)	
Discharge 2.00 U.S.gal/min	

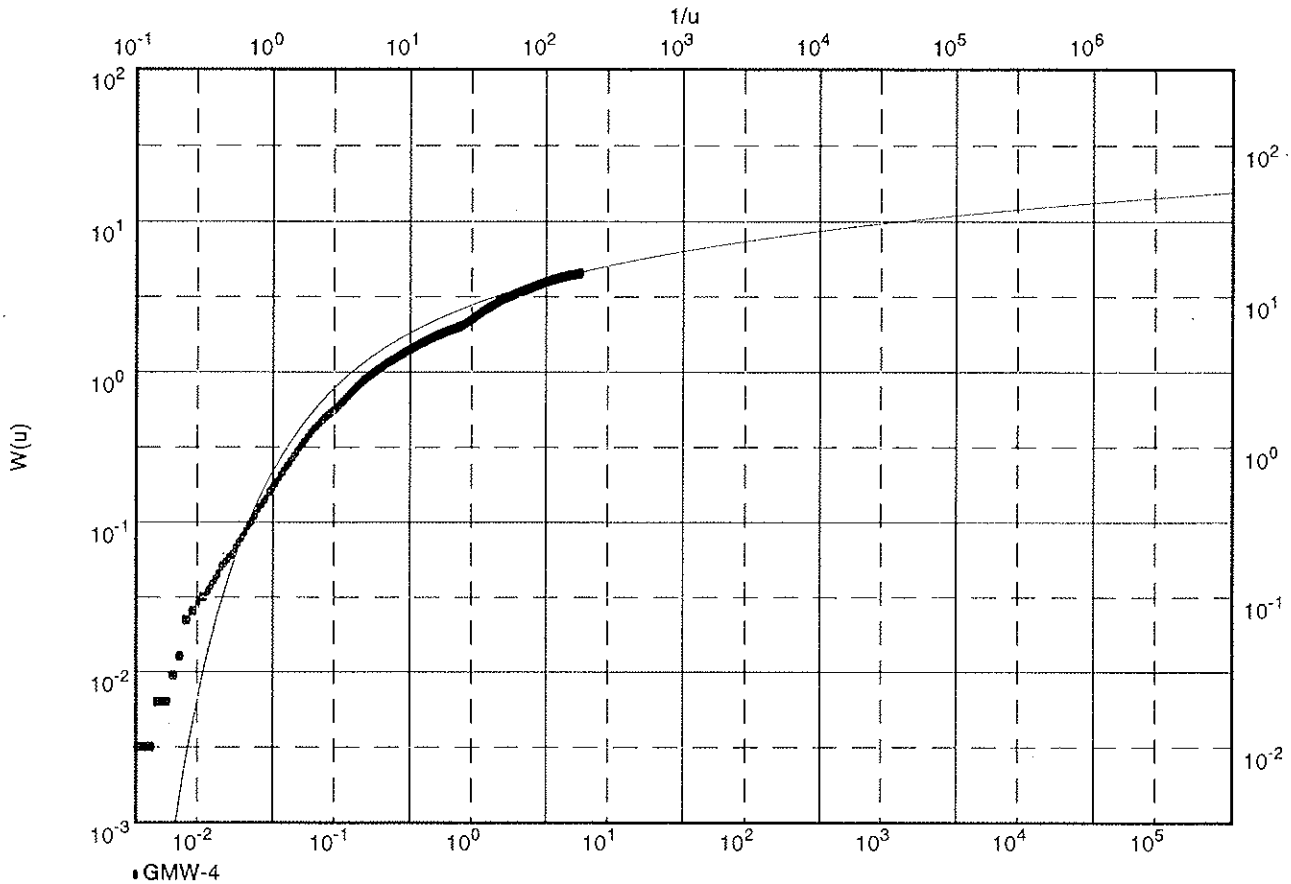


Transmissivity [ft²/min]: 1.62×10^{-2}

Storativity: 9.37×10^{-4}

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 08.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 29.11.2000
GMW-4 (observation)	
Discharge 2.00 U.S.gal/min	



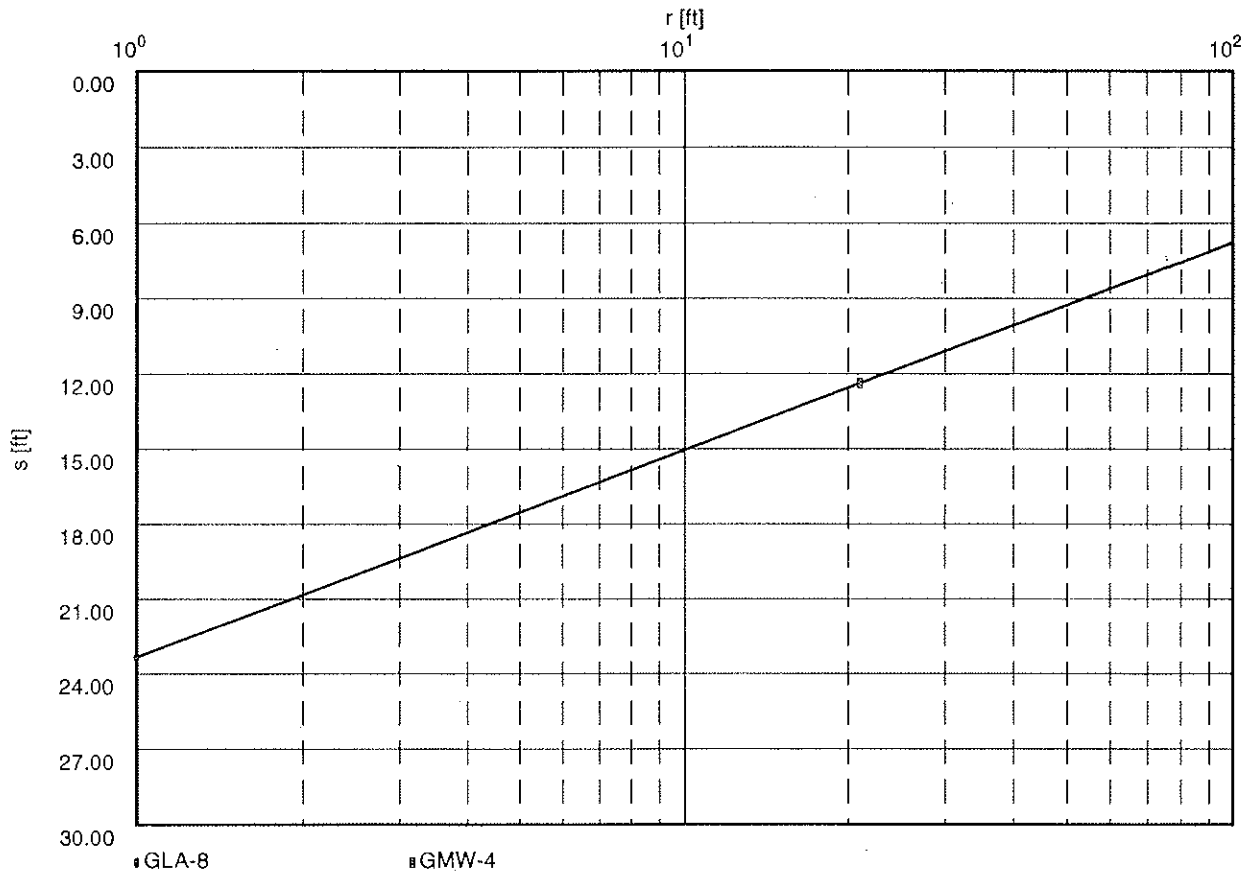
Transmissivity [ft²/min]: 6.72×10^{-3}

Hydraulic conductivity [ft/min]: 1.46×10^{-4}

Aquifer thickness [ft]: 46.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Distance-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 12.12.2000 Page 1 Project: Gregory Canyon Pump Test Evaluated by: wbl

Pumping Test No. 2	Test conducted on: 11.29.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	Analysis at time (t) 600.00 min



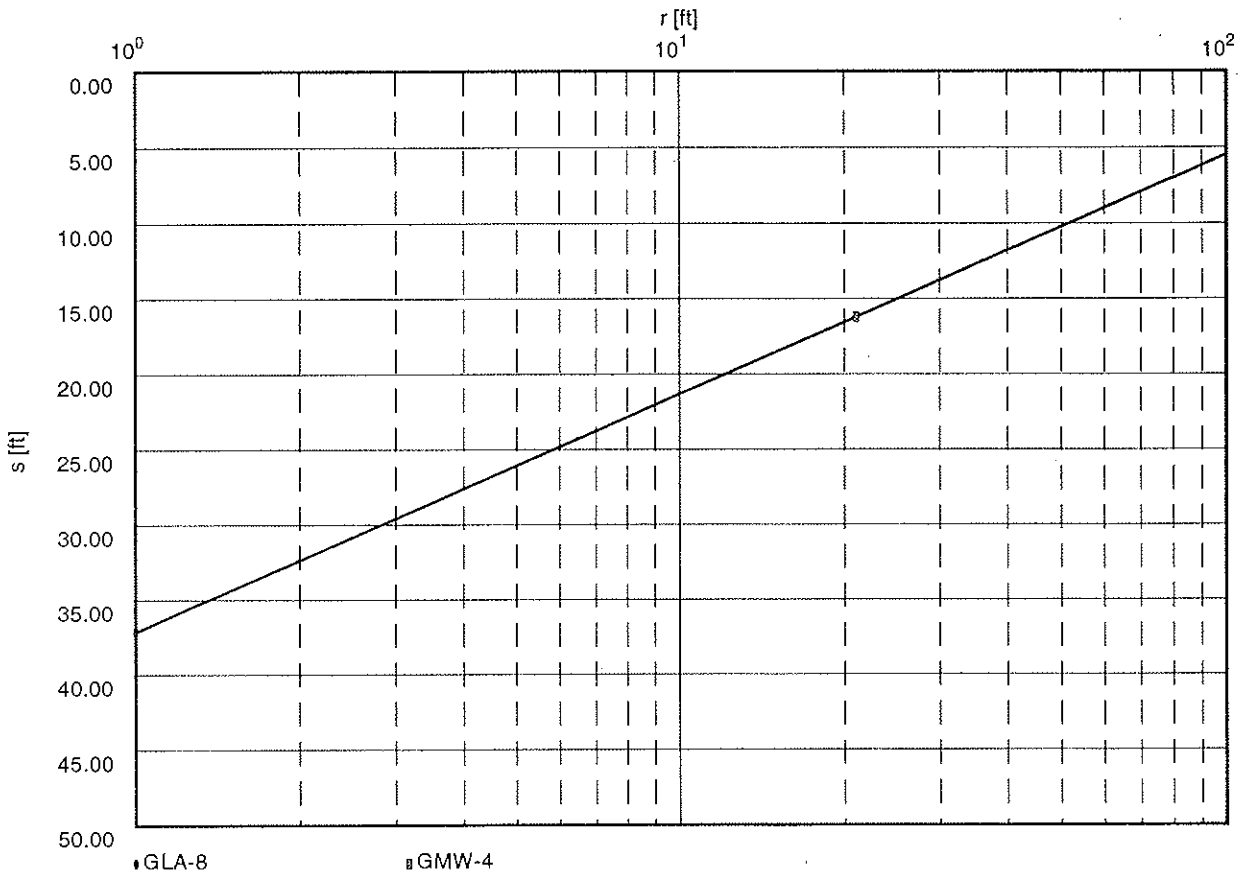
Transmissivity [ft²/min]: 1.18×10^{-2}

Hydraulic conductivity [ft/min]: 1.09×10^{-4}

Aquifer thickness [ft]: 108.00

GeoLogic Associates 1360 Valley Vista Drive Diamond Bar, California (909) 860-3448	Pumping test analysis Distance-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 12.12.2000	Page 1
		Project: Gregory Canyon Pump Test	
		Evaluated by: wbl	

Pumping Test No. 2	Test conducted on: 11.29.2000
GLA-8 (pumping well)	
Discharge 2.00 U.S.gal/min	Analysis at time (t) 1440.00 min



Transmissivity [ft²/min]: 6.18×10^{-3}

Hydraulic conductivity [ft/min]: 5.72×10^{-5}

Aquifer thickness [ft]: 108.00

ATTACHMENT 5

RESULTS OF THE STABILITY ANALYSES

BASE LINER CALCULATIONS

GREGORY CANYON LANDFILL

SEISMIC INDUCED PERMANENT DISPLACEMENT EVALUATION-BASE LINER CROSS-SECTION A-A'

PROCEDURE USED- Bray and Rathje (1998) and Bray et al (1998)

INPUT DATA:

SITE CONDITION- ROCK SITE

FILL HEIGHT, H	- 300 ft.
AVERAGE SHEAR WAVE VELOCITY FOR FILL, V_s	- 1200 ft/sec
EARTHQUAKE MAGNITUDE for the MCE	- 7.1 (on the Elsinore-Julian Segment at ~6 miles)
MAXIMUM HORIZONTAL SITE ACCELERATION, MHA.	–0.40g (mean value for the MCE for the Site)
SIGNIFICANT DURATION – $D_{5\text{-}95}$	- ~16 Sec. (for the MPE, Bray et al, 1998)
YIELD ACCELERATION, k_y	- 0.10g (from pseudo-static analysis)

CALCULATION:

MEAN PERIOD OF SHAKING, for the MCE $T_m = 0.52$ Sec. (Bray et al ,1998),

PREDOMINANT PERIOD OF FILL- $T_s = 4H/V_s$
$= 4x300/1200 = 1.0$ sec

RATIO $T_S/T_m = 1.0/0.52 = 1.92$

RATIO MHEA/MHA x NRF = 0.32 (from Bray and Rathje (1998), Figure 7b for rock site)

Where- MHEA- Maximum Horizontal Equivalent Acceleration of the fill
MHA - Maximum Horizontal Site Acceleration
NRF - Nonlinear Response Factor = 1.0

Thus, MHEA = 0.32 x MHA x 1.0

= 0.32x 0.40g = 0.13g
or, $k_{max} = 0.13$

Ratio $k_y / k_{max} = 0.10/ 0.13 = 0.77$

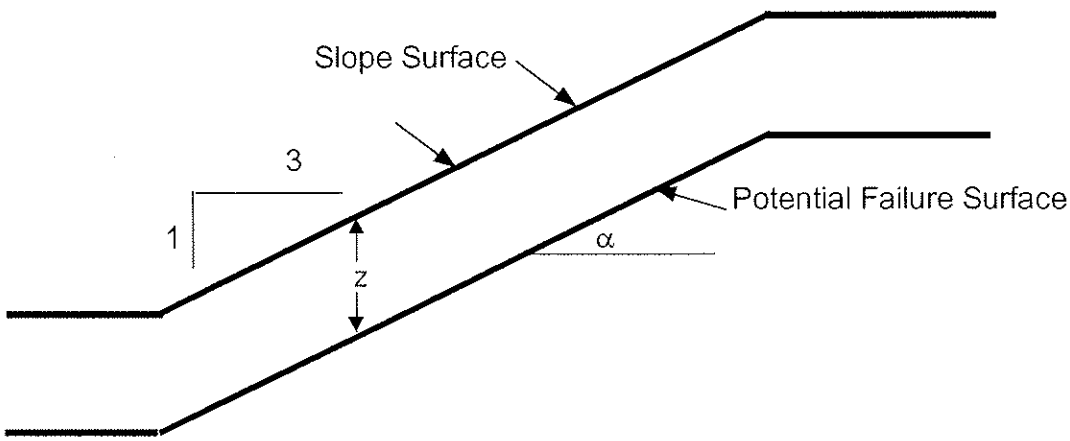
From Figure 11 of Bray and Rathje (1998): $U/(k_{max} D_{5\text{-}95}) = 0.15$ cm/sec

Or, Displacement, U = 0.15 x 0.13 x. 16 = 0.3 cm (0.1 inches)

FINAL COVER CALCULATIONS

COVER SLOPE STABILITY ANALYSIS- INFINITE SLOPE

Gregory Canyon Landfill



Data:	Cover Thickness:	Z =	2	ft
	Cover Soil Density:	γ =	100	pcf
	Soil/Interface Layer Properties:	c =	0	psf
		ϕ =	27	degrees
	Slope Angle (3:1, H:V)	α =	18.4	degrees
	Assumes slope is drained			
	Fill Slope			

1). Static Factor of Safety $= \dfrac{\tan\phi}{\tan\alpha} + \dfrac{2c}{\gamma Z \sin 2\alpha} =$ **1.53**

2). Pseudo-static Factor of Safety $= \dfrac{(1-k\tan\alpha)\tan\phi}{k+\tan\alpha} + \dfrac{c}{\gamma Z(\cos^2\alpha)(k+\tan\alpha)}$

Solve for Factor of Safety = 1.0:

Yield Acceleration = k	Pseudo-Static Factor of Safety
0.15 g	**1.00**

Cover Component Stability Analysis, 40' high slopes with benches @3.5:1
Gregory Canyon Landfill, San Diego County, CA

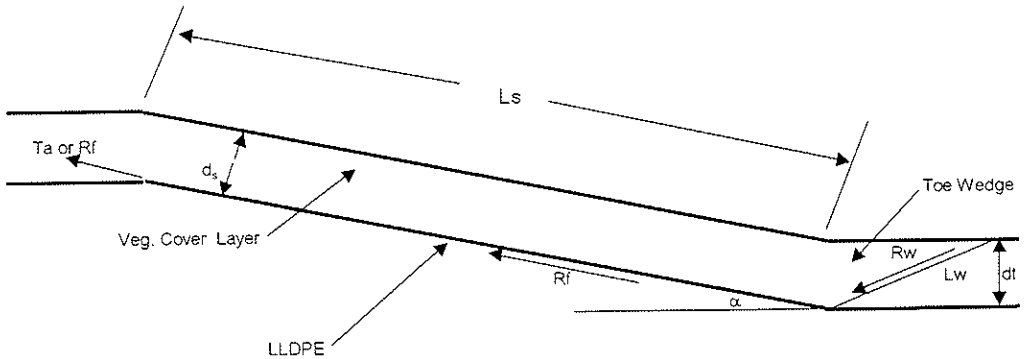
Shear Strength Parameters				Slope Parameters					Toe Parameters			Computed Forces / Unit Width				Geosynthetics			FACTOR OF SAFETY
Soil			Interface	Slope	Slope	Soil	Slope Cover		Soil Thickness		Wedge	Driving	Resisting			Ultimate	Assigned	Allowable	
														Geosynthetic					
Sat. Unit Wt.	Int. Friction Angle	Passive Crit. Failure Angle	Friction Angle(1)	Ratio (H:1V)	Inclin.	Thickness	Vert. Ht.	Slope Length	Total	Ave.	Fail. Length	Soil Load	Toe Soil Wedge	Interface Friction	Tensile Demand	Tensile Strength (2)	Safety Factor	Tensile Strength	
γ_s	ϕ	$\phi_{CR} = 45 - \phi/2$	δ	Z	α	d_s	H_v	$L_s = H_v / SIN\ \alpha$	d_T	$d_a = (2/3)\ d_T$	$L_w = d_T / SIN\phi_{CR}$	$D_s = \gamma_s d_s L_s SIN\alpha$	$R_w = \gamma_s d_a L_w COS\phi_{CR} Tan\phi$	$R_F = \gamma_s d_s L_s COS\alpha Tan\delta$	For FS 1.5; $R_T = 1.5{*}D_s - R_w - R_f$	T_u	Sfa	$T_A = T_u / SF_A$	$FS = (R_w + R_f + T_A) / D_s$
(pcf)	(deg)	(deg)	(deg)	(ft)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(#/ft)	(#/ft)	(#/ft)	(#/ft)	(#/ft)		(#/ft)	
40' high slope between benches @3.0:1 in																			
Vegetative cover/Textured LLDPE Geomembrane																			
100	32	29	27	3	18.40	2	40	126.8	2	1.3	4.13	8000	293.1	12252.9	-546.0	1080	1.1	982	1.69

Notes:
(1) Friction data courtesy of Serrot International, Inc. as presented in "Static and Dynamic Stability Analysis Report, Phase V-D Expansion, Frank R. Bowerman Landfill, Irvine, CA", by IT Corporation, PN 779606, dated May 2001.
(2) Tensile strength from textured LLDPE Geomembrane by Poly-Flex, Inc.

Conditions:
40' high slope between benches @3.0:1 inclination

Cover Profile

24" of Vegetative Cover
60 mil, Textured LLDPE Geomembrane



(Continued)
Cover Component Stability Analysis, Gregory Canyon Landfill, San Diego County, CA

Interface Friction Angle δ	Slope Inclination α	Geogrid/ Geonet Tensile Strength, T_u* lbs/ft	Yield Acceleration K_y*	Calculated Displacement (inches)
Vegetative cover/Textured LLDPE Geomembrane				
27	18.40	982	0.185	3/4 to 4-1/2 inches

Case:
40' high slope between benches @3.0:1 inclinatio

Vegetative cover/Textured LLDPE Geomembrane		
Ls	126.79	
Ky=	**0.185**	g
Geogrid Tensile strength	982	lbs/ft
FS**=	**1.00**	
Ls	126.79	
Ky=	**0.15**	g
Geogrid Tensile strength	982	lbs/ft
FS**=	**1.01**	**Pseudo-static**

Notes:

*Solve for T_u and K_y when FS=1.00

**FS= $\dfrac{((\gamma_s \delta_s L_s \cos\alpha) - (K_y \gamma_s \delta_s L_s \sin\alpha))(\tan\delta) + T_u}{(\gamma_s \delta_s L_s \sin\alpha + K_y \gamma_s \delta_s L_s \cos\alpha)}$

**Equation adapted from Kramer, 1996, Geotechnical Earthquake Engineering, pg 434
Variables defined on previous page

SEISMIC INDUCED PERMANENT DISPLACEMENT EVALUATION-COVER GREGORY CANYON LANDFILL

PROCEDURE USED- Bray and Rathje (1998) and Bray et al (1998)

INPUT DATA:

SITE CONDITION- ROCK SITE

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
SHEAR WAVE VELOCITY, V_s, ft/sec	650	800	900	1000	1100

(from Bray, et al., (1998), Figure 3)

EARTHQUAKE MAGNITUDE for the MCE: 7.1 (on the Elsinore-Julian Segment at ~6 mi.)

MAXIMUM HORIZONTAL SITE ACCELERATION, k_{max}	0.40g (mean value for the MCE for the Site)
SIGNIFICANT DURATION – D_{5-95}	~16 Sec. (for the MPE, Bray et al, 1998)
YIELD ACCELERATION, k_y	0.185g (from pseudo-static analysis for cover component, Table 3)

CALCULATION:

MEAN PERIOD OF SHAKING, for the MCE: T_m = 0.52 Sec. (Bray et al ,1998)

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
PREDOMINANT FILL PERIOD, T_s, sec ($T_s = 2.4H/V_s$)	0.37	0.60	0.80	0.96	1.09
RATIO T_s/T_m =	0.71	1.15	1.54	1.85	2.10
RATIO MHEA/MHA x NRF =	1.2	0.96	0.83	0.80	0.76

(from Bray and Rathje (1998), Figure 8b for rock site)

Where- MHEA - Maximum Horizontal Equivalent Acceleration of the fill = k_{max}
MHA - Maximum Horizontal Site Acceleration
NRF - Nonlinear Response Factor = 1.0

Thus, calculate:

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
MHEA (or k_{max}):	0.48	0.38	0.33	0.32	0.30
Ratio of k_y / k_{max} =	0.39	0.49	0.56	0.58	0.62

Calculate Displacement, U, from Figure 13 of Bray and Rathje (1998):

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
DISPLACEMENT, U, inches:	**3.7"**	**1.8"**	**1.0"**	**0.8"**	**0.5"**

SEISMIC INDUCED PERMANENT DISPLACEMENT EVALUATION-COVER
GREGORY CANYON LANDFILL

PROCEDURE USED - Makdisi and Seed (1978)

INPUT DATA:

SITE CONDITION- ROCK SITE

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
SHEAR WAVE VELOCITY, V_s, ft/sec	650	800	900	1000	1100

(from Bray, et al., (1998), Figure 3)

EARTHQUAKE MAGNITUDE for the MCE: 7.1 (on the Elsinore-Julian Segment at ~6 mi.)

MAXIMUM HORIZONTAL SITE ACCELERATION, k_{max} — 0.40g (mean value for the MCE for the Site)

SIGNIFICANT DURATION – D_{5-95} — ~16 Sec. (for the MPE, Bray et al, 1998)

YIELD ACCELERATION, k_y — 0.185g (from pseudo-static analysis for cover component, Table 3)

CALCULATION:

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
PREDOMINANT FILL PERIOD, T_s, sec ($T_s = 2.4H/V_s$)	0.37	0.60	0.80	0.96	1.09

RATIO k_y/k_{max}= 0.185/0.40 = 0.46

From Figure 11b, Makdisi and Seed (1978), for k_y/k_{max}=0.46, Displacement, U/k_{max} g T=0.03

Therefore, Displacement U= 0.03(k_{max} g T_s)

U = 0.03sec (0.40g) (32.2 ft/sec^2) (T_s, sec)

FILL HEIGHT, H, feet	100'	200'	300'	400'	500'
CALCULATED DISPLACEMENT, U	**1.7"**	**2.3"**	**3.7"**	**4.5"**	**5.1"**

BC Laboratories, Inc.

April 24, 2001

RANDY BAUER
BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765

Subject: Laboratory Submission No.: 01-02922
Samples Received: 03/13/2001

Dear RANDY BAUER

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 03/13/2001.

Enclosed please find the analytical data for the testing requested. A copy of the results for this submission will be sent to the following: GEOLOGIC - BILL LOPEZ. If you have any questions regarding this report please contact me at (661)327-4911, ext. 281.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 01-02922 when calling for assistance.

Sincerely,

Aileen Cantorna
Client Services
BC Laboratories, Inc.

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.
4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

BAS

BRYAN A. STIRRAT & ASSOCIATES

01-02922

CHAIN OF CUSTODY

PROJECT INFORMATION

PROJECT NAME: GREGORY Canyon
JOB NUMBER: ——
PROJECT MANAGER: SARAH BATTELLE
LABORATORY: BC LABS.
SHIPMENT METHOD: LAB COURIER
TURNAROUND TIME:

DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CHLORIDE, SULFATE, NITRATE (N), pH, TDS	Metals (Ca, Mg, Na)	CAM METALS, (EXCEPT MOLYBDENUM) + TIN)	8260 (VOLATILE ORGANICS INCLUDING ISOBUTYL ALCOHOL)	8270 (SVOCs INCLUDING ORGANOPHOSPHORUS PESTICIDES)	Cyanide, SULFIDE	8150 (CHLORINATED HERBICIDES)	8080 (ORGANOCHLORINE PESTICIDES & PCBs)
GLA-11	-1	3-12-01	1045	GW	9	X	X	X	X	X	X	X	X
GLA-12	-2	↓	1515	GW	9	X	X	X	X	X	X	X	X
GLA-13	-3		1230	GW	9	X	X	X	X	X	X	X	X
GLA-16	-4		0900	GW	9	X	X	X	X	X	X	X	X
EQUIP. BLANK	-5		—	W	1				X	~~X~~ RR			
FIELD BLANK	-6		—	W	1				X	~~X~~ RR			
TRIP BLANK	-7TB		—	W	1				X	~~X~~ RR			

CHK BY [signature]

DISTRIBUTION: MA BG SB

SUB-OUT ☐

SHORT HOLDING TIME

Cr^{+6} NO_2 NO_3 OP SS

DO BOD MBAS C O T

* field filtered [initials] 3/14

RELINQUISHED BY: (Signature) [signature] DATE/TIME 3-12-01 (1550) RECEIVED BY: (Signature) [signature]

RELINQUISHED BY: (Signature) [signature] DATE/TIME 3/13/01 12:55 RECEIVED BY: (Signature) [signature]

RELINQUISHED BY: (Signature) [signature] DATE/TIME 3-13-01 20:11 RECEIVED BY: (Signature) [signature]

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed ____
Sample(s):
Integrity ____
Chilled ____
Sealed ____

COMMENTS:

EQUIP FIELD BLANK COLLECTED WITH BAS DI WATER

Analyze 8080 DRAW FROM 8270 CONTAINER PER TINA GREEN @ BC LABS.

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page ___ Of ___

Submission #: 01-02922 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID Red Date/Time 3/13/01
Temperature: 5.5 °C 2015
Thermometer ID: #80 Analyst Init CFC
Emissivity .95
Container PtPe

Ice Chest ID Blue Date/Time 3/13/01
Temperature: 5.1 °C 2020
Thermometer ID: #80 Analyst Init CFC
Emissivity .95
Container PtPe

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7 TB	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL			1	1									1	1										
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS	1		1											1		1								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE													1	1	1	1								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE			1	1									1	1										
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK							1																	
40ml VOA VIAL													2	2	2	2	1	1						
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150	1		1	1										1										
QT EPA ~~525~~ 625/8270	2		2	2										2										
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CFC Date/Time: 3/13/01 2045 [F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES.
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sampling Date/Time: 03/12/2001 @ 10:45

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	100.	mg/L	0.050	0.02	EPA-6010
Magnesium	32.	mg/L	0.050	0.02	EPA-6010
Sodium	100.	mg/L	0.50	0.07	EPA-6010
Sulfate	78.	mg/L	1.	0.25	EPA-300.0
Chloride	177.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	None Detected	mg/L	0.1	0.020	EPA-300.0
pH	7.74	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	733.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sampling Date/Time: 03/12/2001 @ 15:15

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	47.	mg/L	0.050	0.02	EPA-6010
Magnesium	29.	mg/L	0.050	0.02	EPA-6010
Sodium	86.	mg/L	0.50	0.07	EPA-6010
Sulfate	39.	mg/L	1.	0.25	EPA-300.0
Chloride	117.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	0.28	mg/L	0.1	0.020	EPA-300.0
pH	7.42	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	490.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sampling Date/Time: 03/12/2001 @ 12:30

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	100.	mg/L	0.050	0.02	EPA-6010
Magnesium	65.	mg/L	0.050	0.02	EPA-6010
Sodium	130.	mg/L	0.50	0.07	EPA-6010
Sulfate	129.	mg/L	1.	0.25	EPA-300.0
Chloride	290.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	28.5	mg/L	0.2	0.040	EPA-300.0
pH	7.24	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	1010.	mg/L	50.	30.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.05	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sampling Date/Time: 03/12/2001 @ 09:00

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	77.	mg/L	0.050	0.02	EPA-6010
Magnesium	37.	mg/L	0.050	0.02	EPA-6010
Sodium	74.	mg/L	0.50	0.07	EPA-6010
Sulfate	98.	mg/L	1.	0.25	EPA-300.0
Chloride	104.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	5.90	mg/L	0.1	0.020	EPA-300.0
pH	7.52	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	620.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.05	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sampling Date/Time: 03/12/2001 @ 10:45

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		6.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium		None Detected	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sampling Date/Time: 03/12/2001 @ 15:15

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.7	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sampling Date/Time: 03/12/2001 @ 12:30

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*02	0.4	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.8	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		47.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sampling Date/Time: 03/12/2001 @ 09:00

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	2.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*02	0.5	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.6	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/27/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 10:45
Date Extracted: 03/14/2001
Date Analyzed: 03/20/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	75.	%	51-118	
Dibutyl chlorendate	93.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/27/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 15:15
Date Extracted: 03/14/2001
Date Analyzed: 03/20/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	63.	%	51-118	
Dibutyl chlorendate	75.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/27/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 12:30
Date Extracted: 03/14/2001
Date Analyzed: 03/20/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	83.	%	51-118	
Dibutyl chlorendate	99.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/27/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 09:00
Date Extracted: 03/14/2001
Date Analyzed: 03/20/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	74.	%	51-118	
Dibutyl chlorendate	85.	%	62-142	

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 10:45
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	57.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.
Sample specific matrix spike precision not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 15:15
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	51.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.
Sample specific matrix spike precision not within established limits.

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 12:30
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	84.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.
Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 09:00
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	46.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.
Sample specific matrix spike precision not within established limits.

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 10:45
Date Extracted: 03/23/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*62
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Sample Description: GREGORY CANYON, GLA-11, 03/12/2001 @ 10:45

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.13	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*62
Acrylonitrile	None Detected	µg/L	20.	1.965	*62
Allyl Chloride	None Detected	µg/L	5.	0.202	*62
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*62
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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(EPA Method 8260)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Sample Description: GREGORY CANYON, GLA-11, 03/12/2001 @ 10:45

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	92.	76-114
Toluene-d8	97.	88-110
4-Bromofluorobenzene	99.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
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Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 15:15
Date Extracted: 03/23/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*62
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Sample Description: GREGORY CANYON, GLA-12, 03/12/2001 @ 15:15

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*62
Acrylonitrile	None Detected	µg/L	20.	1.965	*62
Allyl Chloride	None Detected	µg/L	5.	0.202	*62
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*62
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Sample Description: GREGORY CANYON, GLA-12, 03/12/2001 @ 15:15

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	86.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 12:30
Date Extracted: 03/23/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*62
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Sample Description: GREGORY CANYON, GLA-13, 03/12/2001 @ 12:30

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*62
Acrylonitrile	None Detected	µg/L	20.	1.965	*62
Allyl Chloride	None Detected	µg/L	5.	0.202	*62
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*62
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Sample Description: GREGORY CANYON, GLA-13, 03/12/2001 @ 12:30

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	92.	76-114
Toluene-d8	101.	88-110
4-Bromofluorobenzene	95.	86-115

Flag Explanations:
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 09:00
Date Extracted: 03/23/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Sample Description: GREGORY CANYON, GLA-16, 03/12/2001 @ 09:00

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Sample Description: GREGORY CANYON, GLA-16, 03/12/2001 @ 09:00

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	87.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	94.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-5

Project Number: GREGORY CANYON
Sample ID: EQUIP BLANK
Sample Matrix: Groundwater

Date Collected: 03/12/2001
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-5

Sample Description: GREGORY CANYON, EQUIP BLANK, 03/12/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.33	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	0.29	µg/L	1.	0.236	*02
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	5.4	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-5

Sample Description: GREGORY CANYON, EQUIP BLANK, 03/12/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	84.	76-114
Toluene-d8	96.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-6

Project Number: GREGORY CANYON
Sample ID: FIELD BLANK
Sample Matrix: Groundwater

Date Collected: 03/12/2001
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	0.080	µg/L	0.5	0.057	*02
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	0.11	µg/L	0.5	0.094	*02
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-6

Sample Description: GREGORY CANYON, FIELD BLANK, 03/12/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.47	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	0.43	µg/L	1.	0.236	*02
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	6.4	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-6

Sample Description: GREGORY CANYON, FIELD BLANK, 03/12/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	82.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-7TB

Project Number: GREGORY CANYON
Sample ID: TRIP BLANK
Sample Matrix: Groundwater

Date Collected: 03/12/2001
Date Extracted: 03/23/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-7TB

Sample Description: GREGORY CANYON, TRIP BLANK, 03/12/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	0.090	µg/L	0.5	0.044	*02
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-7TB

Sample Description: GREGORY CANYON, TRIP BLANK, 03/12/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	89.	76-114
Toluene-d8	95.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 10:45
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.23
Acenaphthylene	None Detected	µg/L	2.	0.36
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.8
Anthracene	None Detected	µg/L	2.	0.22
Benzidine	None Detected	µg/L	20.	0.16
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.84
Benzyl alcohol	None Detected	µg/L	2.	0.66
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.23
delta-BHC	None Detected	µg/L	2.	0.26
gamma-BHC	None Detected	µg/L	2.	0.21
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22
bis(2-ethylhexyl)phthalate	6.6	µg/L	5.	0.33
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.75
4,4-DDT'	None Detected	µg/L	2.	0.22
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.29
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35
Dieldrin	None Detected	µg/L	3.	0.43
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Sample Description: GREGORY CANYON, GLA-11, 03/12/2001 @ 10:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.0
Endosulfan II	None Detected	µg/L	10.	0.78
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.54
Fluoranthene	None Detected	µg/L	2.	0.25
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.27
Hexachlorobutadiene	None Detected	µg/L	2.	0.35
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.24
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.73
3-Nitroaniline	None Detected	µg/L	2.	1.4
4-Nitroaniline	None Detected	µg/L	5.	1.1
Nitrobenzene	None Detected	µg/L	2.	0.23
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23
2-Chlorophenol	None Detected	µg/L	2.	0.16
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.12
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46
4-Aminobiphenyl	None Detected	µg/L	20.	0.17

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Sample Description: GREGORY CANYON, GLA-11, 03/12/2001 @ 10:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.87
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	54.	21-100
Phenol-d5	50.	10-94
Nitrobenzene-d5	82.	35-114
2-Fluorobiphenyl	70.	43-116
2,4,6-Tribromophenol	88.	10-123
d14-Terphenyl	78.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-1

Sample Description: GREGORY CANYON, GLA-11, 03/12/2001 @ 10:45

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 15:15
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.23
Acenaphthylene	None Detected	µg/L	2.	0.36
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.8
Anthracene	None Detected	µg/L	2.	0.22
Benzidine	None Detected	µg/L	20.	0.16
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.84
Benzyl alcohol	None Detected	µg/L	2.	0.66
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.23
delta-BHC	None Detected	µg/L	2.	0.26
gamma-BHC	None Detected	µg/L	2.	0.21
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.33
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.75
4,4-DDT'	None Detected	µg/L	2.	0.22
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.29
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35
Dieldrin	None Detected	µg/L	3.	0.43
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20

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Base Neutral and Acid Extractables
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(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Sample Description: GREGORY CANYON, GLA-12, 03/12/2001 @ 15:15

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.0
Endosulfan II	None Detected	µg/L	10.	0.78
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.54
Fluoranthene	None Detected	µg/L	2.	0.25
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.27
Hexachlorobutadiene	None Detected	µg/L	2.	0.35
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.24
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.73
3-Nitroaniline	None Detected	µg/L	2.	1.4
4-Nitroaniline	None Detected	µg/L	5.	1.1
Nitrobenzene	None Detected	µg/L	2.	0.23
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23
2-Chlorophenol	None Detected	µg/L	2.	0.16
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.12
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46
4-Aminobiphenyl	None Detected	µg/L	20.	0.17

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DIAMOND BAR, CA 91765
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Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Sample Description: GREGORY CANYON, GLA-12, 03/12/2001 @ 15:15

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.87
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	59.	21-100
Phenol-d5	50.	10-94
Nitrobenzene-d5	84.	35-114
2-Fluorobiphenyl	75.	43-116
2,4,6-Tribromophenol	95.	10-123
d14-Terphenyl	83.	33-141

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(EPA Method 8270)

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Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-2

Sample Description: GREGORY CANYON, GLA-12, 03/12/2001 @ 15:15

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 12:30
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.23
Acenaphthylene	None Detected	µg/L	2.	0.36
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.8
Anthracene	None Detected	µg/L	2.	0.22
Benzidine	None Detected	µg/L	20.	0.16
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.84
Benzyl alcohol	None Detected	µg/L	2.	0.66
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.23
delta-BHC	None Detected	µg/L	2.	0.26
gamma-BHC	None Detected	µg/L	2.	0.21
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.33
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.75
4,4-DDT'	None Detected	µg/L	2.	0.22
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.29
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35
Dieldrin	None Detected	µg/L	3.	0.43
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20

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Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Sample Description: GREGORY CANYON, GLA-13, 03/12/2001 @ 12:30

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.0
Endosulfan II	None Detected	µg/L	10.	0.78
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.54
Fluoranthene	None Detected	µg/L	2.	0.25
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.27
Hexachlorobutadiene	None Detected	µg/L	2.	0.35
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.24
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.73
3-Nitroaniline	None Detected	µg/L	2.	1.4
4-Nitroaniline	None Detected	µg/L	5.	1.1
Nitrobenzene	None Detected	µg/L	2.	0.23
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23
2-Chlorophenol	None Detected	µg/L	2.	0.16
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.12
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46
4-Aminobiphenyl	None Detected	µg/L	20.	0.17

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Sample Description: GREGORY CANYON, GLA-13, 03/12/2001 @ 12:30

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.87
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	61.	21-100
Phenol-d5	54.	10-94
Nitrobenzene-d5	86.	35-114
2-Fluorobiphenyl	76.	43-116
2,4,6-Tribromophenol	95.	10-123
d14-Terphenyl	83.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-3

Sample Description: GREGORY CANYON, GLA-13, 03/12/2001 @ 12:30

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 03/12/2001 @ 09:00
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	0.31	µg/L	2.	0.23	*02
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.8	
Anthracene	None Detected	µg/L	2.	0.22	
Benzidine	None Detected	µg/L	20.	0.16	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.66	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.21	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.33	
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.75	
4,4-DDT'	None Detected	µg/L	2.	0.22	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.29	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28	
Di-n-octylphthalate	None Detected	µg/L	2.	0.20	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Sample Description: GREGORY CANYON, GLA-16, 03/12/2001 @ 09:00

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38	
Endosulfan I	None Detected	µg/L	10.	1.0	
Endosulfan II	None Detected	µg/L	10.	0.78	
Endosulfan sulfate	None Detected	µg/L	3.	0.33	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.54	
Fluoranthene	None Detected	µg/L	2.	0.25	
Fluorene	None Detected	µg/L	2.	0.28	
Heptachlor	None Detected	µg/L	2.	0.28	
Heptachlor epoxide	None Detected	µg/L	2.	0.25	
Hexachlorobenzene	0.67	µg/L	2.	0.27	*02
Hexachlorobutadiene	None Detected	µg/L	2.	0.35	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23	
Isophorone	None Detected	µg/L	2.	0.27	
2-Methylnaphthalene	None Detected	µg/L	2.	0.31	
Naphthalene	None Detected	µg/L	2.	0.24	
2-Naphthylamine	None Detected	µg/L	20.	0.066	
2-Nitroaniline	None Detected	µg/L	2.	0.73	
3-Nitroaniline	None Detected	µg/L	2.	1.4	
4-Nitroaniline	None Detected	µg/L	5.	1.1	
Nitrobenzene	None Detected	µg/L	2.	0.23	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	0.60	µg/L	2.	0.23	*02
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23	
2-Chlorophenol	None Detected	µg/L	2.	0.16	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4	
2-Methylphenol	None Detected	µg/L	2.	0.20	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41	
2-Nitrophenol	None Detected	µg/L	2.	0.26	
4-Nitrophenol	None Detected	µg/L	2.	0.46	
Pentachlorophenol	None Detected	µg/L	10.	0.54	
Phenol	None Detected	µg/L	2.	0.19	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24	
Acetophenone	None Detected	µg/L	10.	0.12	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46	
4-Aminobiphenyl	None Detected	µg/L	20.	0.17	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Sample Description: GREGORY CANYON, GLA-16, 03/12/2001 @ 09:00

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.87
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	60.	21-100
Phenol-d5	53.	10-94
Nitrobenzene-d5	85.	35-114
2-Fluorobiphenyl	74.	43-116
2,4,6-Tribromophenol	95.	10-123
d14-Terphenyl	83.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/13/2001
Laboratory No.: 01-02922-4

Sample Description: GREGORY CANYON, GLA-16, 03/12/2001 @ 09:00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*WATER

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Magnesium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Sodium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Sulfate	n.a.	03/14/2001	MMT	EPA-300.0	03/14/2001	MMT
Chloride	n.a.	03/14/2001	MMT	EPA-300.0	03/14/2001	MMT
Nitrate as N	n.a.	03/14/2001	MMT	EPA-300.0	03/14/2001	MMT
pH	n.a.	03/14/2001	ZJH	EPA-9040	03/14/2001	ZJH
Total Dissolved Solids @ 180 C	n.a.	03/15/2001	HPR	EPA-160.1	03/15/2001	HPR
Total Cyanide	EPA-335.3	03/16/2001	MET	EPA-9012	03/16/2001	TDC
Total Sulfide	n.a.	03/14/2001	JWH2	EPA-376.2	03/14/2001	JWH2

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*WATER

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
Calcium	< 0.050	mg/L
Magnesium	< 0.050	mg/L
Sodium	< 0.50	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*WATER

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	TAD-2879-1	89.01	92.30	100.7	100.2	10.20	10.20	mg/L	4.	1.	20	H MEAN	H MEAN	85 - 115
Magnesium	TAD-2879-1	0.5512	0.5624	11.34	11.23	10.20	10.20	mg/L	2.	1.	20	106.	105.	85 - 115
Sodium	TAD-2879-1	49.72	50.92	62.31	62.87	10.20	10.20	mg/L	2.	1.	20	H MEAN	H MEAN	85 - 115
Sulfate	02921-1	184.6	185.5	286.4	286.3	100.0	100.0	mg/L	0.	0.	10	102.	102.	80 - 120
Chloride	02921-1	77.14	76.86	180.4	180.6	100.0	100.0	mg/L	0.	0.	10	103.	103.	80 - 120
Nitrate as N	02921-1	5.444	5.435	10.63	10.42	5.000	5.000	mg/L	0.	2.	10	104.	100.	80 - 120
pH	2922-1	7.74	7.75					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	2922-3	1010.	1000.					mg/L	1.		10			
Total Cyanide	W-TOTAL-02922-	< 0.02	< 0.02	0.2655	0.2655	0.2500	0.2500	mg/L	<PQL	0.	10	106.	106.	90 - 110
Total Sulfide	2922-1	< 0.1	< 0.1	0.6077	0.6111	0.5556	0.5556	mg/L	<PQL	1.	10	104.	105.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*METAL

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	03/12/2001	FIELD	EPA-7060	03/22/2001	TMS
Dissolved Barium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Copper	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/19/2001	JCC
Dissolved Lead	EPA-600-4-79-02	03/12/2001	FIELD	EPA-7421	03/22/2001	TMS
Dissolved Mercury	EPA-7470	03/15/2001	DMM2	EPA-7470	03/16/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-7740	03/22/2001	TMS
Dissolved Silver	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Tin	EPA-600-4-79-02	03/12/2001	FIELD	EPA-282.2	03/19/2001	DIW
Dissolved Thallium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-7841	03/20/2001	DIW
Dissolved Vanadium	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	03/12/2001	FIELD	EPA-6010	03/15/2001	ARD

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*METAL

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<100.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 5.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 2.	µg/L
Dissolved Silver	<10.	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	1.0	µg/L

The trace detection for Dissolved Zinc is an estimated value between the MDL and PQL.

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BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*METAL

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	TAD-2879-1	<100.	<100.	451.0	450.6	408.2	408.2	µg/L	<PQL	0.	20	107.	107.	85 - 115
Dissolved Arsenic	TAD-2719-1	1.034	1.196	26.16	26.72	26.32	26.32	µg/L	<PQL	2.	20	95.	98.	85 - 115
Dissolved Barium	TAD-2879-1	111.1	115.5	326.3	326.4	204.1	204.1	µg/L	<PQL	0.	20	105.	106.	85 - 115
Dissolved Beryllium	TAD-2879-1	< 10.	< 10.	202.4	200.7	204.1	204.1	µg/L	<PQL	1.	20	99.	98.	85 - 115
Dissolved Cadmium	TAD-2879-1	< 10.	< 10.	216.3	213.9	204.1	204.1	µg/L	<PQL	1.	20	104.	103.	85 - 115
Dissolved Chromium	TAD-2879-1	5.000	3.000	217.0	211.3	204.1	204.1	µg/L	<PQL	3.	20	104.	101.	85 - 115
Dissolved Cobalt	TAD-2879-1	< 50.	< 50.	211.7	209.1	204.1	204.1	µg/L	<PQL	1.	20	104.	103.	85 - 115
Dissolved Copper	DISS-2922-4	< 10.	< 10.	229.4	222.7	204.1	204.1	µg/L	<PQL	3.	20	111.	108.	85 - 115
Dissolved Lead	TAD-2719-1	< 1.	< 1.	27.34	27.90	26.32	26.32	µg/L	<PQL	2.	20	104.	106.	85 - 115
Dissolved Mercury	DISS-02922-1	< 0.2	< 0.2	0.9787	0.9933	1.000	1.000	µg/L	<PQL	1.	20	98.	100.	70 - 130
Dissolved Nickel	TAD-2879-1	7.100	4.500	423.8	415.8	408.2	408.2	µg/L	<PQL	2.	20	102.	100.	85 - 115
Dissolved Selenium	TAD-2719-1	< 2.	< 2.	24.54	24.96	26.32	26.32	µg/L	<PQL	2.	20	93.	95.	85 - 115
Dissolved Silver	TAD-2879-1	5.200	3.700	211.3	211.9	204.1	204.1	µg/L	<PQL	0.	20	101.	101.	85 - 115
Dissolved Tin	DISS-2701-1-X4	< 20.	< 20.	189.1	190.7	210.5	210.5	µg/L	<PQL	1.	20	90.	91.	85 - 115
Dissolved Thallium	TAD-2580-4	< 1.	< 1.	23.29	23.77	26.32	26.32	µg/L	<PQL	2.	20	88.	90.	85 - 115
Dissolved Vanadium	TAD-2879-1	5.600	4.300	217.1	213.9	204.1	204.1	µg/L	<PQL	1.	20	104.	102.	85 - 115
Dissolved Zinc	TAD-2879-1	37.50	38.70	257.2	256.5	204.1	204.1	µg/L	<PQL	0.	20	108.	107.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/20/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8080

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8080 compounds	EPA-3510	03/14/2001	JCM	EPA-8080	03/20/2001	SB

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Method 8080

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/20/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8080

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
Aldrin	< 0.005	µg/L
alpha-BHC	< 0.005	µg/L
beta-BHC	< 0.005	µg/L
delta-BHC	< 0.005	µg/L
gamma-BHC	< 0.005	µg/L
Chlordane (Technical)	< 0.1	µg/L
4,4'-DDD	< 0.005	µg/L
4,4'-DDE	< 0.005	µg/L
4,4'-DDT	< 0.005	µg/L
Dieldrin	< 0.005	µg/L
Endosulfan I	< 0.005	µg/L
Endosulfan II	< 0.005	µg/L
Endosulfan Sulfate	< 0.005	µg/L
Endrin	< 0.005	µg/L
Endrin Aldehyde	< 0.01	µg/L
Heptachlor	< 0.005	µg/L
Heptachlor Epoxide	< 0.005	µg/L
Hexachlorocyclopentadiene	< 0.01	µg/L
Methoxychlor	< 0.005	µg/L
Toxaphene	< 2.	µg/L
PCB-1016	< 0.2	µg/L
PCB-1221	< 0.2	µg/L
PCB-1232	< 0.2	µg/L
PCB-1242	< 0.2	µg/L
PCB-1248	< 0.2	µg/L
PCB-1254	< 0.2	µg/L
PCB-1260	< 0.2	µg/L
Total PCB's (Summation)	< 0.2	µg/L

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Method 8080

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/20/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8080

Samples Affected: 01-02922-1 - 01-02922-4

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
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Method 8080

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/20/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8080

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Aldrin	MS 3/14/01	< 0.005	0.213	0.212	0.250	0.250	µg/L	0.	24	85.	85.	45 - 130
gamma-BHC	MS 3/14/01	< 0.005	0.234	0.231	0.250	0.250	µg/L	2.	23	94.	92.	43 - 112
4,4'-DDT	MS 3/14/01	< 0.005	0.220	0.208	0.250	0.250	µg/L	6.	28	88.	83.	52 - 143
Dieldrin	MS 3/14/01	< 0.005	0.234	0.225	0.250	0.250	µg/L	4.	26	94.	90.	60 - 133
Endrin	MS 3/14/01	< 0.005	0.207	0.198	0.250	0.250	µg/L	4.	29	83.	79.	59 - 146
Heptachlor	MS 3/14/01	< 0.005	0.216	0.203	0.250	0.250	µg/L	6.	22	86.	81.	56 - 127

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8150

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8150 compounds	EPA-3510	03/16/2001	PSM/JST	EPA-8150	03/22/2001	KMS

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8150

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
2,4-D	< 0.4	µg/L
Dinoseb	< 0.2	µg/L
2,4,5-T	< 0.09	µg/L
2,4,5-TP (Silvex)	< 0.07	µg/L

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QUALITY CONTROL REPORT
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Method 8150

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8150

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
2,4-D	MS 3/16/01	< 0.4	1.610	2.304	2.000	2.000	µg/L	35.	30	80.	115.	52 - 110
Dinoseb	MS 3/16/01	< 0.2	0.519	0.507	1.000	1.000	µg/L	2.	30	52.	51.	41 - 86
2,4,5-T	MS 3/16/01	< 0.09	0.457	0.566	0.600	0.600	µg/L	21.	30	76.	94.	50 - 104
2,4,5-TP (Silvex)	MS 3/16/01	< 0.07	0.449	0.567	0.600	0.600	µg/L	23.	30	75.	95.	56 - 101

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

The spike RPD and the matrix spike duplicate recovery for 2,4-D are outside QC limits.

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/23/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8260

Samples Affected: 01-02922-1 - 01-02922-7TB

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 compounds 1-4,7TB	EPA-5030	03/23/2001	MC	EPA-8260	03/23/2001	MC
Method 8260 compounds 5,6	EPA-5030	03/24/2001	MC	EPA-8260	03/24/2001	MC

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Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/23/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8260

Samples Affected: 01-02922-1 - 01-02922-7TB

Constituents	Method Blank Readings	Units
Benzene	< 0.5	µg/L
Bromobenzene	< 0.5	µg/L
Bromochloromethane	< 0.5	µg/L
Bromodichloromethane	< 0.5	µg/L
Bromoform	< 0.5	µg/L
Bromomethane	< 1.	µg/L
n-Butylbenzene	< 0.5	µg/L
sec-Butylbenzene	< 0.5	µg/L
tert-Butylbenzene	< 0.5	µg/L
Carbon tetrachloride	< 0.5	µg/L
Chlorobenzene	< 0.5	µg/L
Chloroethane	< 0.5	µg/L
Chloroform	< 0.5	µg/L
Chloromethane	< 0.5	µg/L
2-Chlorotoluene	< 0.5	µg/L
4-Chlorotoluene	< 0.5	µg/L
Dibromochloromethane	< 0.5	µg/L
1,2-Dibromo-3-Chloropropane	< 1.	µg/L
1,2-Dibromoethane	< 0.5	µg/L
Dibromomethane	< 0.5	µg/L
1,2-Dichlorobenzene	< 0.5	µg/L
1,3-Dichlorobenzene	< 0.5	µg/L
1,4-Dichlorobenzene	< 0.5	µg/L
Dichlorodifluoromethane	< 0.5	µg/L
1,1-Dichloroethane	< 0.5	µg/L
1,2-Dichloroethane	< 0.5	µg/L
1,1-Dichloroethene	< 0.5	µg/L
cis-1,2-Dichloroethene	< 0.5	µg/L
trans-1,2-Dichloroethene	< 0.5	µg/L

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/23/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8260

Samples Affected: 01-02922-1 - 01-02922-7TB

Constituents	Method Blank Readings	Units
1,2-Dichloropropane	< 0.5	µg/L
1,3-Dichloropropane	< 0.5	µg/L
2,2-Dichloropropane	< 0.5	µg/L
1,1-Dichloropropene	< 0.5	µg/L
cis-1,3-Dichloropropene	< 0.5	µg/L
trans-1,3-Dichloropropene	< 0.5	µg/L
Ethyl Benzene	< 0.5	µg/L
Hexachlorobutadiene	0.23	µg/L
Isopropylbenzene	< 0.5	µg/L
p-Isopropyltoluene	< 0.5	µg/L
Methylene Chloride	< 1.	µg/L
Naphthalene	< 0.5	µg/L
n-Propylbenzene	< 0.5	µg/L
Styrene	< 0.5	µg/L
1,1,1,2-Tetrachloroethane	< 0.5	µg/L
1,1,2,2-Tetrachloroethane	< 0.5	µg/L
Tetrachloroethene	< 0.5	µg/L
Toluene	< 0.5	µg/L
1,2,3-Trichlorobenzene	< 0.5	µg/L
1,2,4-Trichlorobenzene	< 0.5	µg/L
1,1,1-Trichloroethane	< 0.5	µg/L
1,1,2-Trichloroethane	< 0.5	µg/L
Trichloroethene	< 0.5	µg/L
Trichlorofluoromethane	< 0.5	µg/L
1,2,3-Trichloropropane	< 1.	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.5	µg/L
1,2,4-Trimethylbenzene	< 0.5	µg/L
1,3,5-Trimethylbenzene	< 0.5	µg/L

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/23/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8260

Samples Affected: 01-02922-1 - 01-02922-7TB

Constituents	Method Blank Readings	Units
Vinyl Chloride	< 0.5	µg/L
Total Xylenes	< 1.	µg/L
m & p-Xylene	< 0.5	µg/L
o-Xylene	< 0.5	µg/L
Acetone	<10.	µg/L
Acetonitrile	<20.	µg/L
Acrolein	<50.	µg/L
Acrylonitrile	<20.	µg/L
Allyl Chloride	< 5.	µg/L
t-Amyl methyl ether	< 1.	µg/L
t-Butyl alcohol	<50.	µg/L
Carbon Disulfide	< 1.	µg/L
Chloroprene	< 5.	µg/L
trans-1,4-Dichloro-2-butene	< 5.	µg/L
Diisopropyl ether	< 1.	µg/L
1,4-Dioxane	<300.	µg/L
Ethyl Methacrylate	<20.	µg/L
2-Hexanone	<20.	µg/L
Iodomethane	< 0.5	µg/L
Isobutyl alcohol	<50.	µg/L
Methacrylonitrile	< 5.	µg/L
Methyl Ethyl Ketone	<20.	µg/L
4-Methyl-2-pentanone	<20.	µg/L
Methyl-t-butylether	< 0.5	µg/L
Propionitrile	<20.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/23/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8260

Samples Affected: 01-02922-1 - 01-02922-7TB

The trace detection for Hexachlorobutadiene is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/23/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8260

Samples Affected: 01-02922-1 - 01-02922-7TB

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Benzene	03011-22	< 0.5	25.	25.	25.	25.	µg/L	0.	20	102.	101.	80 - 120
Bromodichloromethane	03011-22	< 0.5	24.	24.	25.	25.	µg/L	0.	20	94.	95.	80 - 120
Chlorobenzene	03011-22	< 0.5	26.	25.	25.	25.	µg/L	2.	20	102.	100.	80 - 120
Chloroethane	03011-22	< 0.5	26.	27.	25.	25.	µg/L	5.	20	103.	108.	80 - 120
1,4-Dichlorobenzene	03011-22	< 0.5	26.	26.	25.	25.	µg/L	1.	20	104.	103.	80 - 120
1,1-Dichloroethane	03011-22	< 0.5	26.	26.	25.	25.	µg/L	1.	20	103.	103.	80 - 120
1,1-Dichloroethene	03011-22	< 0.5	25.	25.	25.	25.	µg/L	0.	20	101.	101.	80 - 120
Toluene	03011-22	< 0.5	26.	25.	25.	25.	µg/L	2.	20	103.	102.	80 - 120
Trichloroethene	03011-22	< 0.5	25.	24.	25.	25.	µg/L	1.	20	99.	97.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/14/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 compounds	EPA-3510	03/16/2001	JCM	EPA-8270	03/23/2001	SKC

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
Acenaphthene	< 2.	µg/L
Acenaphthylene	< 2.	µg/L
Aldrin	< 2.	µg/L
Aniline	< 5.	µg/L
Anthracene	< 2.	µg/L
Benzidine	<20.	µg/L
Benzo (a) anthracene	< 2.	µg/L
Benzo (b) fluoranthene	< 2.	µg/L
Benzo (k) fluoranthene	< 2.	µg/L
Benzo (a) pyrene	< 2.	µg/L
Benzo (ghi) perylene	< 2.	µg/L
Benzoic Acid	<10.	µg/L
Benzyl alcohol	< 2.	µg/L
Butyl Benzyl phthalate	< 2.	µg/L
alpha-BHC	< 2.	µg/L
beta-BHC	< 2.	µg/L
delta-BHC	< 2.	µg/L
gamma-BHC	< 2.	µg/L
bis(2-chloroethyl)ether	< 2.	µg/L
bis(2-chloroethoxy)methane	< 2.	µg/L
bis(2-chloro-1-methylethyl) et	< 2.	µg/L
bis(2-ethylhexyl)phthalate	< 5.	µg/L
4-Bromophenyl phenyl ether	< 2.	µg/L
4-Chloroaniline	< 2.	µg/L
2-Chloronaphthalene	< 2.	µg/L
4-Chlorophenyl phenyl ether	< 2.	µg/L
Chrysene	< 2.	µg/L
4,4-DDD'	< 2.	µg/L
4,4-DDE'	< 3.	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
4,4-DDT'	< 2.	µg/L
Dibenzo (a,h) anthracene	< 3.	µg/L
Dibenzofuran	< 2.	µg/L
Di-n-butyl phthalate	< 2.	µg/L
1,2-Dichlorobenzene	< 2.	µg/L
1,3-Dichlorobenzene	< 2.	µg/L
1,4-Dichlorobenzene	< 2.	µg/L
3,3-Dichlorobenzidine	<10.	µg/L
Dieldrin	< 3.	µg/L
Diethyl phthalate	< 2.	µg/L
Dimethyl phthalate	< 2.	µg/L
2,4-Dinitrotoluene	< 2.	µg/L
2,6-Dinitrotoluene	< 2.	µg/L
Di-n-octylphthalate	< 2.	µg/L
1,2-Diphenylhydrazine	< 2.	µg/L
Endosulfan I	<10.	µg/L
Endosulfan II	<10.	µg/L
Endosulfan sulfate	< 3.	µg/L
Endrin	< 2.	µg/L
Endrin aldehyde	<10.	µg/L
Fluoranthene	< 2.	µg/L
Fluorene	< 2.	µg/L
Heptachlor	< 2.	µg/L
Heptachlor epoxide	< 2.	µg/L
Hexachlorobenzene	< 2.	µg/L
Hexachlorobutadiene	< 2.	µg/L
Hexachlorocyclopentadiene	< 2.	µg/L
Hexachloroethane	< 2.	µg/L
Indeno (1,2,3-cd) pyrene	< 2.	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
Isophorone	< 2.	µg/L
2-Methylnaphthalene	< 2.	µg/L
Naphthalene	< 2.	µg/L
2-Naphthylamine	<20.	µg/L
2-Nitroaniline	< 2.	µg/L
3-Nitroaniline	< 2.	µg/L
4-Nitroaniline	< 5.	µg/L
Nitrobenzene	< 2.	µg/L
n-Nitrosodimethylamine	< 2.	µg/L
n-Nitrosodiphenylamine	< 2.	µg/L
N-Nitrosodi-n-propylamine	< 2.	µg/L
Phenanthrene	< 2.	µg/L
Pyrene	< 2.	µg/L
1,2,4-Trichlorobenzene	< 2.	µg/L
4-Chloro-3-methylphenol	< 5.	µg/L
2-Chlorophenol	< 2.	µg/L
2,4-Dichlorophenol	< 2.	µg/L
2,4-Dimethylphenol	< 2.	µg/L
2,4-Dinitrophenol	<10.	µg/L
2-Methyl-4,6-dinitrophenol	<10.	µg/L
2-Methylphenol	< 2.	µg/L
3- & 4-Methylphenol	< 2.	µg/L
2-Nitrophenol	< 2.	µg/L
4-Nitrophenol	< 2.	µg/L
Pentachlorophenol	<10.	µg/L
Phenol	< 2.	µg/L
2,4,5-Trichlorophenol	< 5.	µg/L
2,4,6-Trichlorophenol	< 5.	µg/L
Acetophenone	<10.	µg/L

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Method 8270

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
2-Acetylaminofluorene	<10.	µg/L
4-Aminobiphenyl	<20.	µg/L
2,6-Dichlorophenol	<10.	µg/L
p-(Dimethylamine) azobenzene	<10.	µg/L
7,12-Dimethylbenz (a) anthracene	<10.	µg/L
3,3'-Dimethylbenzidine	<20.	µg/L
Diphenylamine	<10.	µg/L
Ethyl methanesulfonate	<10.	µg/L
Kepone	<20.	µg/L
Methapyrilene	<10.	µg/L
3-Methylcholanthrene	<10.	µg/L
Methyl methanesulfonate	<10.	µg/L
1,4-Napthoquinone	<20.	µg/L
1-Napthylamine	<20.	µg/L
5-Nitro-o-toluidine	<10.	µg/L
n-Nitrosodibutylamine	<10.	µg/L
n-Nitrosomethylethylamine	<10.	µg/L
n-Nitrosopiperidine	<10.	µg/L
n-Nitrosopyrrolidine	<10.	µg/L
Pentachlorobenzene	<10.	µg/L
Pentachloronitrobenzene	<10.	µg/L
Phenacetin	<10.	µg/L
1,4-Phenylenediamine	<20.	µg/L
Pronamide	<10.	µg/L
1,2,4,5-Tetrachlorobenzene	<10.	µg/L
2,3,4,6-Tetrachlorophenol	<10.	µg/L
o-Toluidine	<10.	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	Method Blank Readings	Units
0,0,0-Triethyl phosphorothioate	<10.	µg/L
1,3,5-Trinitrobenzene	<10.	µg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200102922-1*8270

Samples Affected: 01-02922-1 - 01-02922-4

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	W-PB1-03-16-01	< 2.	57.73	60.14	80.00	80.00	µg/L	4.	20	72.	75.	61 - 116
1,4-Dichlorobenzene	W-PB1-03-16-01	< 2.	54.90	60.17	80.00	80.00	µg/L	9.	15	69.	75.	55 - 107
2,4-Dinitrotoluene	W-PB1-03-16-01	< 2.	67.70	68.54	80.00	80.00	µg/L	1.	20	85.	86.	57 - 130
Hexachlorobenzene	W-PB1-03-16-01	< 2.	70.22	70.83	80.00	80.00	µg/L	1.	20	88.	89.	67 - 123
Hexachlorobutadiene	W-PB1-03-16-01	< 2.	45.10	52.16	80.00	80.00	µg/L	15.	16	56.	65.	47 - 102
Hexachloroethane	W-PB1-03-16-01	< 2.	42.76	48.64	80.00	80.00	µg/L	13.	20	53.	61.	35 - 133
Nitrobenzene	W-PB1-03-16-01	< 2.	64.29	68.12	80.00	80.00	µg/L	6.	20	80.	85.	65 - 101
N-Nitrosodi-n-propylamine	W-PB1-03-16-01	< 2.	56.69	58.42	80.00	80.00	µg/L	3.	20	71.	73.	66 - 105
Pyrene	W-PB1-03-16-01	< 2.	64.70	62.37	80.00	80.00	µg/L	4.	10	81.	78.	50 - 125
1,2,4-Trichlorobenzene	W-PB1-03-16-01	< 2.	53.86	60.66	80.00	80.00	µg/L	12.	14	67.	76.	60 - 101
4-Chloro-3-methylphenol	W-PB1-03-16-01	< 5.	68.55	69.23	80.00	80.00	µg/L	1.	20	86.	87.	75 - 113
2-Chlorophenol	W-PB1-03-16-01	< 2.	65.30	65.27	80.00	80.00	µg/L	0.	10	82.	82.	71 - 108
2-Methylphenol	W-PB1-03-16-01	< 2.	59.86	59.32	80.00	80.00	µg/L	1.	10	75.	74.	70 - 104
3- & 4-Methylphenol	W-PB1-03-16-01	< 2.	50.03	48.57	80.00	80.00	µg/L	3.	11	63.	61.	58 - 101
4-Nitrophenol	W-PB1-03-16-01	< 2.	28.37	30.36	80.00	80.00	µg/L	7.	15	35.	38.	29 - 71
Pentachlorophenol	W-PB1-03-16-01	< 10.	68.65	67.15	80.00	80.00	µg/L	2.	11	86.	84.	67 - 142
Phenol	W-PB1-03-16-01	< 2.	34.56	35.10	80.00	80.00	µg/L	2.	12	43.	44.	32 - 63
2,4,6-Trichlorophenol	W-PB1-03-16-01	< 5.	63.91	63.17	80.00	80.00	µg/L	1.	20	80.	79.	59 - 128

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc.

April 19, 2001

RANDY BAUER
BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765

Subject: Laboratory Submission No.: 01-03004
Samples Received: 03/14/2001

Dear RANDY BAUER

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 03/14/2001.

Enclosed please find the analytical data for the testing requested. A copy of the results for this submission will be sent to the following: GEOLOGIC - BILL LOPEZ. If you have any questions regarding this report please contact me at (661)327-4911, ext. 281.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 01-03004 when calling for assistance.

Sincerely,

Aileen Cantorna
Client Services
BC Laboratories, Inc.

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01-03004

BAS
BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

PROJECT INFORMATION

PROJECT NAME: Gregory Canyon
JOB NUMBER:
PROJECT MANAGER: Sarah Battelle
LABORATORY: BC Labs
SHIPMENT METHOD: Lab Courier
TURNAROUND TIME:
DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

CHK BY: [✓]
DISTRIBUTION: MA BG SB
SUB-OUT [ ]

SHORT HOLDING TIME: Cr^{+6}, NO_2, NO_3, OP, SS, DO, BOD, MBAS

BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	Chloride, Sulfate, Nitrate, (N) pH, TDS	Metals (Ca, Mg, Na)	Cam metals (except Mo, B, Density) + Tin	8260C Volatile Organics including Iodine, Isobutyl Alcohol	8270C SVOCs including Organophosphorus Pesticides	Cyanide, Sulfide	8150 Chlorinated Herbicides	8082 Organochlorine Pesticides & PCBs
GLA-14	-1	3-13-01	0820	GW	9	X	X	X	X	X	X	X	X
MWD#34	-2		1205	GW	9	X	X	X	X	X	X	X	X
LUCIO-2	-3		1245	GW	9	X	X	X	X	X	X	X	X
GLA-2	-4		1115	GW	9	X	X	X	X	X	X	X	X
GLA-10	-5		1030	GW	9	X	X	X	X	X	X	X	X
GLA-4	-6		0940	GW	9	X	X	X	X	X	X	X	X
GLA-5	-7		0910	GW	9	X	X	X	X	X	X	X	X
SW-1	-8		1335	SW	9	X	X	X	X	X	X	X	X
SW-2	-9		1310	SW	9	X	X	X	X	X	X	X	X
Field Blank	-10		—	W	1				X				
Equip Blank	-11		—	W	1				X				

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	3-13-01/1445	[signature]
[signature]	3/14/01 1408	[signature]
[signature]	3-14-01 19:20	[signature]

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed _____
Sample(s):
Integrity _____
Chilled _____
Sealed _____

COMMENTS:
Equip. & Field Blanks collected with BAS DI water.
Analyze 8080 draw from 8270 container per Tina Green @ BC Labs.

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

3922

BAS
BRYAN A. STIRRAT & ASSOCIATES

01-03004

CHAIN OF CUSTODY

PROJECT INFORMATION

PROJECT NAME: Gregory Canyon
JOB NUMBER: —
PROJECT MANAGER: Sarah Battelle
LABORATORY: BC Labs
SHIPMENT METHOD: Lab Courier
TURNAROUND TIME:
DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	8260 Volatile Organics including Isobutyl Alcohol
Trip Blank	-12TB	3-13-01	—	W.	1	X

RELINQUISHED BY: (Signature) DATE/TIME 3-13-01/1445 RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME 3/14/01 1420 RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME 3-14-01 19:20 RECEIVED BY: (Signature)

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed _____
Sample(s):
Integrity _____
Chilled _____
Sealed _____

COMMENTS:

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 1 Of 2

Submission #: 01-03004 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID Blue Date/Time 3/14/01
Temperature: 4.7 °C 1955
Thermometer ID: #80 Analyst Init CCl
Emissivity .95
Container PtPl

Ice Chest ID Blue Date/Time 3/14/01
Temperature: 2.9 °C 1955
Thermometer ID: #80 Analyst Init CCl
Emissivity .95
Container PtPl

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12TB
QT GENERAL MINERAL/ GENERAL PHYSICAL		1		1	1								1					1	1					
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS		1		1	1								1					1	1					
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE		1		1	1								1					1	1					
PT NITROGEN FORMS																								
PT TOTAL SULFIDE		1		1	1								1					1	1					
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								1
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150		1		1	1								1					1	1					
QT EPA ~~525~~ 625/8270		2		2	2								2					2	2					
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CCl Date/Time: 3/14/01 1955

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BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00

Submission #: 01-03004 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID Red Date/Time 3/14/01
Temperature: 3.0 °C 2000
Thermometer ID: #80 Analyst Init CFL
Emissivity .95
Container PtPl

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL			1					1	1															
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS			1					1	1															
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE			1					1	1															
PT NITROGEN FORMS																								
PT TOTAL SULFIDE			1					1	1															
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL	2	2	2	2	2	2	2	2	2	1	1													
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150			1					1	1															
QT EPA ~~525~~ 625/8270			2					2	2															
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CFL Date/Time: 3/14/01 2020

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sampling Date/Time: 03/13/2001 @ 08:20

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		82.	mg/L	0.050	0.02	EPA-6010
Magnesium		46.	mg/L	0.050	0.02	EPA-6010
Sodium		100.	mg/L	0.50	0.07	EPA-6010
Sulfate		70.	mg/L	2.	0.50	EPA-300.0
Chloride		160.	mg/L	1.	0.18	EPA-300.0
Nitrate as N	*	15.5	mg/L	0.1	0.020	EPA-300.0
pH		7.56	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		667.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Note: CCV frequency criteria not met. Reanalyzed past holding time for confirmation.

California D.O.H.S. Cert. #1186

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Project Number: GREGORY CANYON
Sample ID: MWD #34
Sampling Date/Time: 03/13/2001 @ 12:05

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		86.	mg/L	0.050	0.02	EPA-6010
Magnesium		30.	mg/L	0.050	0.02	EPA-6010
Sodium		66.	mg/L	0.50	0.07	EPA-6010
Sulfate		144.	mg/L	1.	0.25	EPA-300.0
Chloride		81.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*	None Detected	mg/L	0.1	0.020	EPA-300.0
pH		7.69	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		543.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Project Number: GREGORY CANYON
Sample ID: LUC10-2
Sampling Date/Time: 03/13/2001 @ 12:45

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		98.	mg/L	0.050	0.02	EPA-6010
Magnesium		35.	mg/L	0.050	0.02	EPA-6010
Sodium		68.	mg/L	0.50	0.07	EPA-6010
Sulfate		134.	mg/L	1.	0.25	EPA-300.0
Chloride		91.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*	1.40	mg/L	0.1	0.020	EPA-300.0
pH		7.51	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		610.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sampling Date/Time: 03/13/2001 @ 11:15

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		160.	mg/L	0.050	0.02	EPA-6010
Magnesium		92.	mg/L	0.050	0.02	EPA-6010
Sodium		240.	mg/L	0.50	0.07	EPA-6010
Sulfate		150.	mg/L	5.	1.3	EPA-300.0
Chloride		450.	mg/L	2.5	0.45	EPA-300.0
Nitrate as N	*	42.9	mg/L	0.5	0.10	EPA-300.0
pH		7.37	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		1410.	mg/L	100.	50.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sampling Date/Time: 03/13/2001 @ 10:30

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		68.	mg/L	0.050	0.02	EPA-6010
Magnesium		39.	mg/L	0.050	0.02	EPA-6010
Sodium		98.	mg/L	0.50	0.07	EPA-6010
Sulfate		62.	mg/L	1.	0.25	EPA-300.0
Chloride		151.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*	6.59	mg/L	0.1	0.020	EPA-300.0
pH		7.30	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		587.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Note: CCV frequency criteria not met. Reanalyzed past holding time for confirmation.

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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sampling Date/Time: 03/13/2001 @ 09:40

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		72.	mg/L	0.050	0.02	EPA-6010
Magnesium		23.	mg/L	0.050	0.02	EPA-6010
Sodium		79.	mg/L	0.50	0.07	EPA-6010
Sulfate		38.	mg/L	1.	0.25	EPA-300.0
Chloride		75.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*	1.50	mg/L	0.1	0.020	EPA-300.0
pH		7.22	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		453.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Note: CCV frequency criteria not met. Reanalyzed past holding time for confirmation.

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M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sampling Date/Time: 03/13/2001 @ 09:10

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	110.	mg/L	0.050	0.02	EPA-6010
Magnesium	66.	mg/L	0.050	0.02	EPA-6010
Sodium	120.	mg/L	0.50	0.07	EPA-6010
Sulfate	317.	mg/L	1.	0.25	EPA-300.0
Chloride	163.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N *	18.8	mg/L	0.1	0.020	EPA-300.0
pH	7.28	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	1000.	mg/L	50.	30.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Project Number: GREGORY CANYON
Sample ID: SW-1
Sampling Date/Time: 03/13/2001 @ 13:35

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		98.	mg/L	0.050	0.02	EPA-6010
Magnesium		34.	mg/L	0.050	0.02	EPA-6010
Sodium		76.	mg/L	0.50	0.07	EPA-6010
Sulfate		183.	mg/L	1.	0.25	EPA-300.0
Chloride		107.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*	None Detected	mg/L	0.1	0.020	EPA-300.0
pH		8.18	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		627.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Note: CCV frequency criteria not met. Reanalyzed past holding time for confirmation.

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Project Number: GREGORY CANYON
Sample ID: SW-2
Sampling Date/Time: 03/13/2001 @ 13:10

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		97.	mg/L	0.050	0.02	EPA-6010
Magnesium		35.	mg/L	0.050	0.02	EPA-6010
Sodium		76.	mg/L	0.50	0.07	EPA-6010
Sulfate		184.	mg/L	1.	0.25	EPA-300.0
Chloride		109.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*	None Detected	mg/L	0.1	0.020	EPA-300.0
pH		7.96	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		623.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Note: CCV frequency criteria not met. Reanalyzed past holding time for confirmation.

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sampling Date/Time: 03/13/2001 @ 08:20

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	0.9	µg/L	2.	0.7	EPA-7060
Dissolved Barium		120.	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*02	0.4	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.8	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium	*01	None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Project Number: GREGORY CANYON
Sample ID: MWD #34
Sampling Date/Time: 03/13/2001 @ 12:05

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		110.	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*02	0.5	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium		None Detected	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Project Number: GREGORY CANYON
Sample ID: LUC10-2
Sampling Date/Time: 03/13/2001 @ 12:45

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		120.	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*02	0.6	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.6	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		10.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sampling Date/Time: 03/13/2001 @ 11:15

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*02	0.5	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	1.	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		50.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		11.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sampling Date/Time: 03/13/2001 @ 10:30

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium		None Detected	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		40.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		270.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.

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Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sampling Date/Time: 03/13/2001 @ 09:40

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	0.9	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.6	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Zinc		460.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sampling Date/Time: 03/13/2001 @ 09:10

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		180.	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*02	0.7	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		20.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		89.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Project Number: GREGORY CANYON
Sample ID: SW-1
Sampling Date/Time: 03/13/2001 @ 13:35

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium		None Detected	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Zinc	*02	2.0	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Project Number: GREGORY CANYON
Sample ID: SW-2
Sampling Date/Time: 03/13/2001 @ 13:10

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		None Detected	µg/L	100.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.4	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium		None Detected	µg/L	2.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*01	None Detected	µg/L	20.	6.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Zinc		None Detected	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample was filtered and acidified in field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Laboratory Director

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/04/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 11:15
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	87.	%	51-118	
Dibutyl chlorendate	102.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 08:20
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	77.	%	51-118	
Dibutyl chlorendate	85.	%	62-142	

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Department Supervisor

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Project Number: GREGORY CANYON
Sample ID: MWD #34
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:05
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	86.	%	51-118	
Dibutyl chlorendate	97.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Project Number: GREGORY CANYON
Sample ID: LUC10-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:45
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	66.	%	51-118	
Dibutyl chlorendate	89.	%	62-142	

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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CIVIL AND ENVIRONMENTAL ENGINEERS
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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 10:30
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	85.	%	51-118	
Dibutyl chlorendate	106.	%	62-142	

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:40
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	75.	%	51-118	
Dibutyl chlorendate	105.	%	62-142	

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:10
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	89.	%	51-118	
Dibutyl chlorendate	108.	%	62-142	

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:35
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	82.	%	51-118	
Dibutyl chlorendate	103.	%	62-142	

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(EPA Method 8080)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:10
Date Extracted: 03/16/2001
Date Analyzed: 03/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	83.	%	51-118	
Dibutyl chlorendate	92.	%	62-142	

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 08:20
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	55.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.
Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Project Number: GREGORY CANYON
Sample ID: MWD #34
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:05
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	42.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.
Sample specific matrix spike precision not within established limits.

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(EPA Method 8150)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Project Number: GREGORY CANYON
Sample ID: LUC10-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:45
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	87.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 11:15
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	81.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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1360 VALLEY VISTA DRIVE
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Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 10:30
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	72.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:40
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	62.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Sample specific matrix spike precision not within established limits.

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:10
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	55.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:35
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	65.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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Sample specific matrix spike precision not within established limits.

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Department Supervisor

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Chlorinated Herbicides
(EPA Method 8150)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/03/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:10
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*
Dinoseb	None Detected	µg/L	0.2	0.052	
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	69.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Sample specific matrix spike precision not within established limits.

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 08:20
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Sample Description: GREGORY CANYON, GLA-14, 03/13/2001 @ 08:20

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	*03
Acetonitrile	None Detected	µg/L	20.	5.247	*03
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Sample Description: GREGORY CANYON, GLA-14, 03/13/2001 @ 08:20

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	86.	76-114
Toluene-d8	101.	88-110
4-Bromofluorobenzene	97.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Project Number: GREGORY CANYON
Sample ID: MWD #34
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:05
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Sample Description: GREGORY CANYON, MWD #34, 03/13/2001 @ 12:05

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Sample Description: GREGORY CANYON, MWD #34, 03/13/2001 @ 12:05

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	89.	76-114
Toluene-d8	91.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Project Number: GREGORY CANYON
Sample ID: LUC10-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:45
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Sample Description: GREGORY CANYON, LUC10-2, 03/13/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Sample Description: GREGORY CANYON, LUC10-2, 03/13/2001 @ 12:45

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	89.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 11:15
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Sample Description: GREGORY CANYON, GLA-2, 03/13/2001 @ 11:15

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	0.13	µg/L	0.5	0.044	*02
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Sample Description: GREGORY CANYON, GLA-2, 03/13/2001 @ 11:15

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	86.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	93.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 10:30
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Sample Description: GREGORY CANYON, GLA-10, 03/13/2001 @ 10:30

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Sample Description: GREGORY CANYON, GLA-10, 03/13/2001 @ 10:30

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	83.	76-114
Toluene-d8	99.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:40
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Sample Description: GREGORY CANYON, GLA-4, 03/13/2001 @ 09:40

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*62
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*62
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*62
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*62

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Sample Description: GREGORY CANYON, GLA-4, 03/13/2001 @ 09:40

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	84.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*62 = Internal end CCV % difference criteria not met.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:10
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Sample Description: GREGORY CANYON, GLA-5, 03/13/2001 @ 09:10

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*03
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*03
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*03

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Sample Description: GREGORY CANYON, GLA-5, 03/13/2001 @ 09:10

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	85.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:35
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Sample Description: GREGORY CANYON, SW-1, 03/13/2001 @ 13:35

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	6.4	µg/L	1.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*03
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*03
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*03

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Volatile Organic Analysis
(EPA Method 8260)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Sample Description: GREGORY CANYON, SW-1, 03/13/2001 @ 13:35

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	84.	76-114
Toluene-d8	102.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:10
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Sample Description: GREGORY CANYON, SW-2, 03/13/2001 @ 13:10

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*03
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*03
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*03

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(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Sample Description: GREGORY CANYON, SW-2, 03/13/2001 @ 13:10

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	84.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	100.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-10

Project Number: GREGORY CANYON
Sample ID: FIELD BLANK
Sample Matrix: Water

Date Collected: 03/13/2001
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-10

Sample Description: GREGORY CANYON, FIELD BLANK, 03/13/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.10	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*03
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*03
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	4.8	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*03

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-10

Sample Description: GREGORY CANYON, FIELD BLANK, 03/13/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	89.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	97.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-11

Project Number: GREGORY CANYON
Sample ID: EQUIP BLANK
Sample Matrix: Water

Date Collected: 03/13/2001
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	0.21	µg/L	0.5	0.044	*02
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	0.12	µg/L	0.5	0.057	*02
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-11

Sample Description: GREGORY CANYON, EQUIP BLANK, 03/13/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.76	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	0.58	µg/L	1.	0.236	*02
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*03
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*03
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*03

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-11

Sample Description: GREGORY CANYON, EQUIP BLANK, 03/13/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	91.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	96.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-12TB

Project Number: GREGORY CANYON
Sample ID: TRAVEL BLANK
Sample Matrix: TRIP BLANK

Date Collected:
Date Extracted: 03/24/2001
Date Analyzed: 03/24/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	*03
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	None Detected	µg/L	0.5	0.057	
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	
Styrene	None Detected	µg/L	0.5	0.047	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-12TB

Sample Description: GREGORY CANYON, TRAVEL BLANK

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	10.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	*03
Acrylonitrile	None Detected	µg/L	20.	1.965	*03
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	1.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	*03
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	*TI
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	0.5	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	5.	1.036	*03
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	*03

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/02/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-12TB

Sample Description: GREGORY CANYON, TRAVEL BLANK

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	88.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	101.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
*TI = Result based on tentatively identified compound search.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 08:20
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Acenaphthene	None Detected	µg/L	2.
Acenaphthylene	None Detected	µg/L	2.
Aldrin	None Detected	µg/L	2.
Aniline	None Detected	µg/L	5.
Anthracene	None Detected	µg/L	2.
Benzidine	None Detected	µg/L	20.
Benzo (a) anthracene	None Detected	µg/L	2.
Benzo (b) fluoranthene	None Detected	µg/L	2.
Benzo (k) fluoranthene	None Detected	µg/L	2.
Benzo (a) pyrene	None Detected	µg/L	2.
Benzo (ghi) perylene	None Detected	µg/L	2.
Benzoic Acid	None Detected	µg/L	10.
Benzyl alcohol	None Detected	µg/L	2.
Butyl Benzyl phthalate	None Detected	µg/L	2.
alpha-BHC	None Detected	µg/L	2.
beta-BHC	None Detected	µg/L	2.
delta-BHC	None Detected	µg/L	2.
gamma-BHC	None Detected	µg/L	2.
bis(2-chloroethyl)ether	None Detected	µg/L	2.
bis(2-chloroethoxy)methane	None Detected	µg/L	2.
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.
4-Bromophenyl phenyl ether	None Detected	µg/L	2.
4-Chloroaniline	None Detected	µg/L	2.
2-Chloronaphthalene	None Detected	µg/L	2.
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.
Chrysene	None Detected	µg/L	2.
4,4-DDD'	None Detected	µg/L	2.
4,4-DDE'	None Detected	µg/L	3.
4,4-DDT'	None Detected	µg/L	2.
Dibenzo (a,h) anthracene	None Detected	µg/L	3.
Dibenzofuran	None Detected	µg/L	2.
Di-n-butyl phthalate	None Detected	µg/L	2.
1,2-Dichlorobenzene	None Detected	µg/L	2.
1,3-Dichlorobenzene	None Detected	µg/L	2.
1,4-Dichlorobenzene	None Detected	µg/L	2.
3,3-Dichlorobenzidine	None Detected	µg/L	10.
Dieldrin	None Detected	µg/L	3.
Diethyl phthalate	None Detected	µg/L	2.
Dimethyl phthalate	None Detected	µg/L	2.

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Sample Description: GREGORY CANYON, GLA-14, 03/13/2001 @ 08:20

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
2,4-Dinitrotoluene	None Detected	µg/L	2.
2,6-Dinitrotoluene	None Detected	µg/L	2.
Di-n-octylphthalate	None Detected	µg/L	2.
1,2-Diphenylhydrazine	None Detected	µg/L	2.
Endosulfan I	None Detected	µg/L	10.
Endosulfan II	None Detected	µg/L	10.
Endosulfan sulfate	None Detected	µg/L	3.
Endrin	None Detected	µg/L	2.
Endrin aldehyde	None Detected	µg/L	10.
Fluoranthene	None Detected	µg/L	2.
Fluorene	None Detected	µg/L	2.
Heptachlor	None Detected	µg/L	2.
Heptachlor epoxide	None Detected	µg/L	2.
Hexachlorobenzene	None Detected	µg/L	2.
Hexachlorobutadiene	None Detected	µg/L	2.
Hexachlorocyclopentadiene	None Detected	µg/L	2.
Hexachloroethane	None Detected	µg/L	2.
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.
Isophorone	None Detected	µg/L	2.
2-Methylnaphthalene	None Detected	µg/L	2.
Naphthalene	None Detected	µg/L	2.
2-Naphthylamine	None Detected	µg/L	20.
2-Nitroaniline	None Detected	µg/L	2.
3-Nitroaniline	None Detected	µg/L	2.
4-Nitroaniline	None Detected	µg/L	5.
Nitrobenzene	None Detected	µg/L	2.
n-Nitrosodimethylamine	None Detected	µg/L	2.
n-Nitrosodiphenylamine	None Detected	µg/L	2.
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.
Phenanthrene	None Detected	µg/L	2.
Pyrene	None Detected	µg/L	2.
1,2,4-Trichlorobenzene	None Detected	µg/L	2.
4-Chloro-3-methylphenol	None Detected	µg/L	5.
2-Chlorophenol	None Detected	µg/L	2.
2,4-Dichlorophenol	None Detected	µg/L	2.
2,4-Dimethylphenol	None Detected	µg/L	2.
2,4-Dinitrophenol	None Detected	µg/L	10.
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.
2-Methylphenol	None Detected	µg/L	2.
3- & 4-Methylphenol	None Detected	µg/L	2.
2-Nitrophenol	None Detected	µg/L	2.
4-Nitrophenol	None Detected	µg/L	2.
Pentachlorophenol	None Detected	µg/L	10.
Phenol	None Detected	µg/L	2.

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Sample Description: GREGORY CANYON, GLA-14, 03/13/2001 @ 08:20

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	
Acetophenone	None Detected	µg/L	10.	
2-Acetylaminofluorene	None Detected	µg/L	10.	
4-Aminobiphenyl	None Detected	µg/L	20.	
2,6-Dichlorophenol	None Detected	µg/L	10.	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	
Diphenylamine	None Detected	µg/L	10.	
Ethyl methanesulfonate	None Detected	µg/L	10.	
Kepone	None Detected	µg/L	20.	
Methapyrilene	None Detected	µg/L	10.	*03
3-Methylcholanthrene	None Detected	µg/L	10.	
Methyl methanesulfonate	None Detected	µg/L	10.	
1,4-Napthoquinone	None Detected	µg/L	20.	
1-Napthylamine	None Detected	µg/L	20.	
5-Nitro-o-toluidine	None Detected	µg/L	10.	
n-Nitrosodibutylamine	None Detected	µg/L	10.	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	
n-Nitrosopiperidine	None Detected	µg/L	10.	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	
Pentachlorobenzene	None Detected	µg/L	10.	
Pentachloronitrobenzene	None Detected	µg/L	10.	
Phenacetin	None Detected	µg/L	10.	
1,4-Phenylenediamine	None Detected	µg/L	20.	
Pronamide	None Detected	µg/L	10.	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	
o-Toluidine	None Detected	µg/L	10.	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	63.	21-100
Phenol-d5	52.	10-94
Nitrobenzene-d5	90.	35-114
2-Fluorobiphenyl	78.	43-116
2,4,6-Tribromophenol	101.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-1

Sample Description: GREGORY CANYON, GLA-14, 03/13/2001 @ 08:20

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	97.	33-141

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186, AZ License: AZ0345

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Project Number: GREGORY CANYON
Sample ID: MWD #34
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:05
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001 @ 20:03
Analyst: SKC
Dilution Used: 1.02

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.24
Acenaphthylene	None Detected	µg/L	2.	0.37
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.9
Anthracene	None Detected	µg/L	2.	0.23
Benzidine	None Detected	µg/L	20.	0.17
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.68
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.65
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.85
Benzyl alcohol	None Detected	µg/L	2.	0.67
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.25
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.24
delta-BHC	None Detected	µg/L	2.	0.27
gamma-BHC	None Detected	µg/L	2.	0.22
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.57
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.23
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.34
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.30
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.32
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.77
4,4-DDT'	None Detected	µg/L	2.	0.23
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.30
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.25
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.36
Dieldrin	None Detected	µg/L	3.	0.44
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Sample Description: GREGORY CANYON, MWD #34, 03/13/2001 @ 12:05

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.29
Di-n-octylphthalate	None Detected	µg/L	2.	0.21
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.39
Endosulfan I	None Detected	µg/L	10.	1.1
Endosulfan II	None Detected	µg/L	10.	0.80
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.55
Fluoranthene	None Detected	µg/L	2.	0.26
Fluorene	None Detected	µg/L	2.	0.29
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.28
Hexachlorobutadiene	None Detected	µg/L	2.	0.36
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.25
2-Naphthylamine	None Detected	µg/L	20.	0.068
2-Nitroaniline	None Detected	µg/L	2.	0.75
3-Nitroaniline	None Detected	µg/L	2.	1.5
4-Nitroaniline	None Detected	µg/L	5.	1.2
Nitrobenzene	None Detected	µg/L	2.	0.24
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.21
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.37
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24
2-Chlorophenol	None Detected	µg/L	2.	0.17
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.69
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.5
2-Methylphenol	None Detected	µg/L	2.	0.21
3- & 4-Methylphenol	None Detected	µg/L	2.	0.42
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.47
Pentachlorophenol	None Detected	µg/L	10.	0.55
Phenol	None Detected	µg/L	2.	0.19

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Sample Description: GREGORY CANYON, MWD #34, 03/13/2001 @ 12:05

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.25	
Acetophenone	None Detected	µg/L	10.	0.120	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459	
4-Aminobiphenyl	None Detected	µg/L	20.	0.164	
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248	
Diphenylamine	None Detected	µg/L	10.	0.081	
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170	
Kepone	None Detected	µg/L	20.	2.466	
Methapyrilene	None Detected	µg/L	10.	0.869	*03
3-Methylcholanthrene	None Detected	µg/L	10.	0.148	
Methyl methanesulfonate	None Detected	µg/L	10.	0.128	
1,4-Napthoquinone	None Detected	µg/L	20.	0.473	
1-Napthylamine	None Detected	µg/L	20.	0.182	
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062	
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253	
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158	
Pentachlorobenzene	None Detected	µg/L	10.	0.124	
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167	
Phenacetin	None Detected	µg/L	10.	0.127	
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484	
Pronamide	None Detected	µg/L	10.	0.134	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239	
o-Toluidine	None Detected	µg/L	10.	0.072	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	42.	21-100
Phenol-d5	37.	10-94
Nitrobenzene-d5	89.	35-114
2-Fluorobiphenyl	77.	43-116
2,4,6-Tribromophenol	73.	10-123
d14-Terphenyl	89.	33-141

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-2

Sample Description: GREGORY CANYON, MWD #34, 03/13/2001 @ 12:05

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Project Number: GREGORY CANYON
Sample ID: LUC10-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 12:45
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001 @ 20:46
Analyst: SKC
Dilution Used: 1.02

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.24
Acenaphthylene	None Detected	µg/L	2.	0.37
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.9
Anthracene	None Detected	µg/L	2.	0.23
Benzidine	None Detected	µg/L	20.	0.17
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.68
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.65
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.85
Benzyl alcohol	None Detected	µg/L	2.	0.67
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.25
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.24
delta-BHC	None Detected	µg/L	2.	0.27
gamma-BHC	None Detected	µg/L	2.	0.22
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.57
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.23
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.34
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.30
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.32
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.77
4,4-DDT'	None Detected	µg/L	2.	0.23
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.30
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.25
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.36
Dieldrin	None Detected	µg/L	3.	0.44
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Sample Description: GREGORY CANYON, LUC10-2, 03/13/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.29
Di-n-octylphthalate	None Detected	µg/L	2.	0.21
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.39
Endosulfan I	None Detected	µg/L	10.	1.1
Endosulfan II	None Detected	µg/L	10.	0.80
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.55
Fluoranthene	None Detected	µg/L	2.	0.26
Fluorene	None Detected	µg/L	2.	0.29
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.28
Hexachlorobutadiene	None Detected	µg/L	2.	0.36
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.25
2-Naphthylamine	None Detected	µg/L	20.	0.068
2-Nitroaniline	None Detected	µg/L	2.	0.75
3-Nitroaniline	None Detected	µg/L	2.	1.5
4-Nitroaniline	None Detected	µg/L	5.	1.2
Nitrobenzene	None Detected	µg/L	2.	0.24
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.21
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.37
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24
2-Chlorophenol	None Detected	µg/L	2.	0.17
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.69
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.5
2-Methylphenol	None Detected	µg/L	2.	0.21
3- & 4-Methylphenol	None Detected	µg/L	2.	0.42
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.47
Pentachlorophenol	None Detected	µg/L	10.	0.55
Phenol	None Detected	µg/L	2.	0.19

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Sample Description: GREGORY CANYON, LUC10-2, 03/13/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.25	
Acetophenone	None Detected	µg/L	10.	0.120	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459	
4-Aminobiphenyl	None Detected	µg/L	20.	0.164	
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248	
Diphenylamine	None Detected	µg/L	10.	0.081	
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170	
Kepone	None Detected	µg/L	20.	2.466	
Methapyrilene	None Detected	µg/L	10.	0.869	*03
3-Methylcholanthrene	None Detected	µg/L	10.	0.148	
Methyl methanesulfonate	None Detected	µg/L	10.	0.128	
1,4-Napthoquinone	None Detected	µg/L	20.	0.473	
1-Napthylamine	None Detected	µg/L	20.	0.182	
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062	
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253	
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158	
Pentachlorobenzene	None Detected	µg/L	10.	0.124	
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167	
Phenacetin	None Detected	µg/L	10.	0.127	
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484	
Pronamide	None Detected	µg/L	10.	0.134	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239	
o-Toluidine	None Detected	µg/L	10.	0.072	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	56.	21-100
Phenol-d5	48.	10-94
Nitrobenzene-d5	84.	35-114
2-Fluorobiphenyl	74.	43-116
2,4,6-Tribromophenol	83.	10-123
d14-Terphenyl	97.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-3

Sample Description: GREGORY CANYON, LUC10-2, 03/13/2001 @ 12:45

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 11:15
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001 @ 09:06
Analyst: SKC
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.23
Acenaphthylene	None Detected	µg/L	2.	0.36
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.8
Anthracene	None Detected	µg/L	2.	0.22
Benzidine	None Detected	µg/L	20.	0.16
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.84
Benzyl alcohol	None Detected	µg/L	2.	0.66
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.23
delta-BHC	None Detected	µg/L	2.	0.26
gamma-BHC	None Detected	µg/L	2.	0.21
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.33
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.75
4,4-DDT'	None Detected	µg/L	2.	0.22
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.29
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35
Dieldrin	None Detected	µg/L	3.	0.43
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25

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Base Neutral and Acid Extractables
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Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Sample Description: GREGORY CANYON, GLA-2, 03/13/2001 @ 11:15

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.0
Endosulfan II	None Detected	µg/L	10.	0.78
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.54
Fluoranthene	None Detected	µg/L	2.	0.25
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.27
Hexachlorobutadiene	None Detected	µg/L	2.	0.35
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.24
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.73
3-Nitroaniline	None Detected	µg/L	2.	1.4
4-Nitroaniline	None Detected	µg/L	5.	1.1
Nitrobenzene	None Detected	µg/L	2.	0.23
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23
2-Chlorophenol	None Detected	µg/L	2.	0.16
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19

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Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Sample Description: GREGORY CANYON, GLA-2, 03/13/2001 @ 11:15

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	60.	21-100
Phenol-d5	53.	10-94
Nitrobenzene-d5	85.	35-114
2-Fluorobiphenyl	74.	43-116
2,4,6-Tribromophenol	93.	10-123
d14-Terphenyl	91.	33-141

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1360 VALLEY VISTA DRIVE
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Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-4

Sample Description: GREGORY CANYON, GLA-2, 03/13/2001 @ 11:15

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 10:30
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Acenaphthene	None Detected	µg/L	2.
Acenaphthylene	None Detected	µg/L	2.
Aldrin	None Detected	µg/L	2.
Aniline	None Detected	µg/L	5.
Anthracene	None Detected	µg/L	2.
Benzidine	None Detected	µg/L	20.
Benzo (a) anthracene	None Detected	µg/L	2.
Benzo (b) fluoranthene	None Detected	µg/L	2.
Benzo (k) fluoranthene	None Detected	µg/L	2.
Benzo (a) pyrene	None Detected	µg/L	2.
Benzo (ghi) perylene	None Detected	µg/L	2.
Benzoic Acid	None Detected	µg/L	10.
Benzyl alcohol	None Detected	µg/L	2.
Butyl Benzyl phthalate	None Detected	µg/L	2.
alpha-BHC	None Detected	µg/L	2.
beta-BHC	None Detected	µg/L	2.
delta-BHC	None Detected	µg/L	2.
gamma-BHC	None Detected	µg/L	2.
bis(2-chloroethyl)ether	None Detected	µg/L	2.
bis(2-chloroethoxy)methane	None Detected	µg/L	2.
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.
4-Bromophenyl phenyl ether	None Detected	µg/L	2.
4-Chloroaniline	None Detected	µg/L	2.
2-Chloronaphthalene	None Detected	µg/L	2.
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.
Chrysene	None Detected	µg/L	2.
4,4-DDD'	None Detected	µg/L	2.
4,4-DDE'	None Detected	µg/L	3.
4,4-DDT'	None Detected	µg/L	2.
Dibenzo (a,h) anthracene	None Detected	µg/L	3.
Dibenzofuran	None Detected	µg/L	2.
Di-n-butyl phthalate	None Detected	µg/L	2.
1,2-Dichlorobenzene	None Detected	µg/L	2.
1,3-Dichlorobenzene	None Detected	µg/L	2.
1,4-Dichlorobenzene	None Detected	µg/L	2.
3,3-Dichlorobenzidine	None Detected	µg/L	10.
Dieldrin	None Detected	µg/L	3.
Diethyl phthalate	None Detected	µg/L	2.
Dimethyl phthalate	None Detected	µg/L	2.

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Sample Description: GREGORY CANYON, GLA-10, 03/13/2001 @ 10:30

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
2,4-Dinitrotoluene	None Detected	µg/L	2.
2,6-Dinitrotoluene	None Detected	µg/L	2.
Di-n-octylphthalate	None Detected	µg/L	2.
1,2-Diphenylhydrazine	None Detected	µg/L	2.
Endosulfan I	None Detected	µg/L	10.
Endosulfan II	None Detected	µg/L	10.
Endosulfan sulfate	None Detected	µg/L	3.
Endrin	None Detected	µg/L	2.
Endrin aldehyde	None Detected	µg/L	10.
Fluoranthene	None Detected	µg/L	2.
Fluorene	None Detected	µg/L	2.
Heptachlor	None Detected	µg/L	2.
Heptachlor epoxide	None Detected	µg/L	2.
Hexachlorobenzene	None Detected	µg/L	2.
Hexachlorobutadiene	None Detected	µg/L	2.
Hexachlorocyclopentadiene	None Detected	µg/L	2.
Hexachloroethane	None Detected	µg/L	2.
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.
Isophorone	None Detected	µg/L	2.
2-Methylnaphthalene	None Detected	µg/L	2.
Naphthalene	None Detected	µg/L	2.
2-Naphthylamine	None Detected	µg/L	20.
2-Nitroaniline	None Detected	µg/L	2.
3-Nitroaniline	None Detected	µg/L	2.
4-Nitroaniline	None Detected	µg/L	5.
Nitrobenzene	None Detected	µg/L	2.
n-Nitrosodimethylamine	None Detected	µg/L	2.
n-Nitrosodiphenylamine	None Detected	µg/L	2.
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.
Phenanthrene	None Detected	µg/L	2.
Pyrene	None Detected	µg/L	2.
1,2,4-Trichlorobenzene	None Detected	µg/L	2.
4-Chloro-3-methylphenol	None Detected	µg/L	5.
2-Chlorophenol	None Detected	µg/L	2.
2,4-Dichlorophenol	None Detected	µg/L	2.
2,4-Dimethylphenol	None Detected	µg/L	2.
2,4-Dinitrophenol	None Detected	µg/L	10.
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.
2-Methylphenol	None Detected	µg/L	2.
3- & 4-Methylphenol	None Detected	µg/L	2.
2-Nitrophenol	None Detected	µg/L	2.
4-Nitrophenol	None Detected	µg/L	2.
Pentachlorophenol	None Detected	µg/L	10.
Phenol	None Detected	µg/L	2.

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Base Neutral and Acid Extractables
Organic Analysis
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Sample Description: GREGORY CANYON, GLA-10, 03/13/2001 @ 10:30

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	
Acetophenone	None Detected	µg/L	10.	
2-Acetylaminofluorene	None Detected	µg/L	10.	
4-Aminobiphenyl	None Detected	µg/L	20.	
2,6-Dichlorophenol	None Detected	µg/L	10.	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	
Diphenylamine	None Detected	µg/L	10.	
Ethyl methanesulfonate	None Detected	µg/L	10.	
Kepone	None Detected	µg/L	20.	
Methapyrilene	None Detected	µg/L	10.	
3-Methylcholanthrene	None Detected	µg/L	10.	
Methyl methanesulfonate	None Detected	µg/L	10.	*03
1,4-Napthoquinone	None Detected	µg/L	20.	
1-Napthylamine	None Detected	µg/L	20.	
5-Nitro-o-toluidine	None Detected	µg/L	10.	
n-Nitrosodibutylamine	None Detected	µg/L	10.	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	
n-Nitrosopiperidine	None Detected	µg/L	10.	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	
Pentachlorobenzene	None Detected	µg/L	10.	
Pentachloronitrobenzene	None Detected	µg/L	10.	
Phenacetin	None Detected	µg/L	10.	
1,4-Phenylenediamine	None Detected	µg/L	20.	
Pronamide	None Detected	µg/L	10.	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	
o-Toluidine	None Detected	µg/L	10.	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	61.	21-100
Phenol-d5	51.	10-94
Nitrobenzene-d5	86.	35-114
2-Fluorobiphenyl	74.	43-116
2,4,6-Tribromophenol	99.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-5

Sample Description: GREGORY CANYON, GLA-10, 03/13/2001 @ 10:30

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	91.	33-141

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186, AZ License: AZ0345

Stuart G. Buttram
Department Supervisor

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:40
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Acenaphthene	None Detected	µg/L	2.
Acenaphthylene	None Detected	µg/L	2.
Aldrin	None Detected	µg/L	2.
Aniline	None Detected	µg/L	5.
Anthracene	None Detected	µg/L	2.
Benzidine	None Detected	µg/L	20.
Benzo (a) anthracene	None Detected	µg/L	2.
Benzo (b) fluoranthene	None Detected	µg/L	2.
Benzo (k) fluoranthene	None Detected	µg/L	2.
Benzo (a) pyrene	None Detected	µg/L	2.
Benzo (ghi) perylene	None Detected	µg/L	2.
Benzoic Acid	None Detected	µg/L	10.
Benzyl alcohol	None Detected	µg/L	2.
Butyl Benzyl phthalate	None Detected	µg/L	2.
alpha-BHC	None Detected	µg/L	2.
beta-BHC	None Detected	µg/L	2.
delta-BHC	None Detected	µg/L	2.
gamma-BHC	None Detected	µg/L	2.
bis(2-chloroethyl)ether	None Detected	µg/L	2.
bis(2-chloroethoxy)methane	None Detected	µg/L	2.
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.
4-Bromophenyl phenyl ether	None Detected	µg/L	2.
4-Chloroaniline	None Detected	µg/L	2.
2-Chloronaphthalene	None Detected	µg/L	2.
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.
Chrysene	None Detected	µg/L	2.
4,4-DDD'	None Detected	µg/L	2.
4,4-DDE'	None Detected	µg/L	3.
4,4-DDT'	None Detected	µg/L	2.
Dibenzo (a,h) anthracene	None Detected	µg/L	3.
Dibenzofuran	None Detected	µg/L	2.
Di-n-butyl phthalate	None Detected	µg/L	2.
1,2-Dichlorobenzene	None Detected	µg/L	2.
1,3-Dichlorobenzene	None Detected	µg/L	2.
1,4-Dichlorobenzene	None Detected	µg/L	2.
3,3-Dichlorobenzidine	None Detected	µg/L	10.
Dieldrin	None Detected	µg/L	3.
Diethyl phthalate	None Detected	µg/L	2.
Dimethyl phthalate	None Detected	µg/L	2.

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Sample Description: GREGORY CANYON, GLA-4, 03/13/2001 @ 09:40

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
2,4-Dinitrotoluene	None Detected	µg/L	2.
2,6-Dinitrotoluene	None Detected	µg/L	2.
Di-n-octylphthalate	None Detected	µg/L	2.
1,2-Diphenylhydrazine	None Detected	µg/L	2.
Endosulfan I	None Detected	µg/L	10.
Endosulfan II	None Detected	µg/L	10.
Endosulfan sulfate	None Detected	µg/L	3.
Endrin	None Detected	µg/L	2.
Endrin aldehyde	None Detected	µg/L	10.
Fluoranthene	None Detected	µg/L	2.
Fluorene	None Detected	µg/L	2.
Heptachlor	None Detected	µg/L	2.
Heptachlor epoxide	None Detected	µg/L	2.
Hexachlorobenzene	None Detected	µg/L	2.
Hexachlorobutadiene	None Detected	µg/L	2.
Hexachlorocyclopentadiene	None Detected	µg/L	2.
Hexachloroethane	None Detected	µg/L	2.
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.
Isophorone	None Detected	µg/L	2.
2-Methylnaphthalene	None Detected	µg/L	2.
Naphthalene	None Detected	µg/L	2.
2-Naphthylamine	None Detected	µg/L	20.
2-Nitroaniline	None Detected	µg/L	2.
3-Nitroaniline	None Detected	µg/L	2.
4-Nitroaniline	None Detected	µg/L	5.
Nitrobenzene	None Detected	µg/L	2.
n-Nitrosodimethylamine	None Detected	µg/L	2.
n-Nitrosodiphenylamine	None Detected	µg/L	2.
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.
Phenanthrene	None Detected	µg/L	2.
Pyrene	None Detected	µg/L	2.
1,2,4-Trichlorobenzene	None Detected	µg/L	2.
4-Chloro-3-methylphenol	None Detected	µg/L	5.
2-Chlorophenol	None Detected	µg/L	2.
2,4-Dichlorophenol	None Detected	µg/L	2.
2,4-Dimethylphenol	None Detected	µg/L	2.
2,4-Dinitrophenol	None Detected	µg/L	10.
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.
2-Methylphenol	None Detected	µg/L	2.
3- & 4-Methylphenol	None Detected	µg/L	2.
2-Nitrophenol	None Detected	µg/L	2.
4-Nitrophenol	None Detected	µg/L	2.
Pentachlorophenol	None Detected	µg/L	10.
Phenol	None Detected	µg/L	2.

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Sample Description: GREGORY CANYON, GLA-4, 03/13/2001 @ 09:40

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
2,4,5-Trichlorophenol	None Detected	µg/L	5.
2,4,6-Trichlorophenol	None Detected	µg/L	5.
Acetophenone	None Detected	µg/L	10.
2-Acetylaminofluorene	None Detected	µg/L	10.
4-Aminobiphenyl	None Detected	µg/L	20.
2,6-Dichlorophenol	None Detected	µg/L	10.
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.
3,3'-Dimethylbenzidine	None Detected	µg/L	20.
Diphenylamine	None Detected	µg/L	10.
Ethyl methanesulfonate	None Detected	µg/L	10.
Kepone	None Detected	µg/L	20.
Methapyrilene	None Detected	µg/L	10.
3-Methylcholanthrene	None Detected	µg/L	10.
Methyl methanesulfonate	None Detected	µg/L	10.
1,4-Napthoquinone	None Detected	µg/L	20.
1-Napthylamine	None Detected	µg/L	20.
5-Nitro-o-toluidine	None Detected	µg/L	10.
n-Nitrosodibutylamine	None Detected	µg/L	10.
n-Nitrosomethylethylamine	None Detected	µg/L	10.
n-Nitrosopiperidine	None Detected	µg/L	10.
n-Nitrosopyrrolidine	None Detected	µg/L	10.
Pentachlorobenzene	None Detected	µg/L	10.
Pentachloronitrobenzene	None Detected	µg/L	10.
Phenacetin	None Detected	µg/L	10.
1,4-Phenylenediamine	None Detected	µg/L	20.
Pronamide	None Detected	µg/L	10.
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.
o-Toluidine	None Detected	µg/L	10.
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.
1,3,5-Trinitrobenzene	None Detected	µg/L	10.

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	55.	21-100
Phenol-d5	50.	10-94
Nitrobenzene-d5	79.	35-114
2-Fluorobiphenyl	71.	43-116
2,4,6-Tribromophenol	91.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-6

Sample Description: GREGORY CANYON, GLA-4, 03/13/2001 @ 09:40

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	86.	33-141

California D.O.H.S. Cert. #1186, AZ License: AZ0345

Stuart G. Buttram
Department Supervisor

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Base Neutral and Acid Extractables
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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Groundwater

Date Collected: 03/13/2001 @ 09:10
Date Extracted: 03/16/2001
Date Analyzed: 03/22/2001

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Acenaphthene	None Detected	µg/L	2.
Acenaphthylene	None Detected	µg/L	2.
Aldrin	None Detected	µg/L	2.
Aniline	None Detected	µg/L	5.
Anthracene	None Detected	µg/L	2.
Benzidine	None Detected	µg/L	20.
Benzo (a) anthracene	None Detected	µg/L	2.
Benzo (b) fluoranthene	None Detected	µg/L	2.
Benzo (k) fluoranthene	None Detected	µg/L	2.
Benzo (a) pyrene	None Detected	µg/L	2.
Benzo (ghi) perylene	None Detected	µg/L	2.
Benzoic Acid	None Detected	µg/L	10.
Benzyl alcohol	None Detected	µg/L	2.
Butyl Benzyl phthalate	None Detected	µg/L	2.
alpha-BHC	None Detected	µg/L	2.
beta-BHC	None Detected	µg/L	2.
delta-BHC	None Detected	µg/L	2.
gamma-BHC	None Detected	µg/L	2.
bis(2-chloroethyl)ether	None Detected	µg/L	2.
bis(2-chloroethoxy)methane	None Detected	µg/L	2.
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.
4-Bromophenyl phenyl ether	None Detected	µg/L	2.
4-Chloroaniline	None Detected	µg/L	2.
2-Chloronaphthalene	None Detected	µg/L	2.
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.
Chrysene	None Detected	µg/L	2.
4,4-DDD'	None Detected	µg/L	2.
4,4-DDE'	None Detected	µg/L	3.
4,4-DDT'	None Detected	µg/L	2.
Dibenzo (a,h) anthracene	None Detected	µg/L	3.
Dibenzofuran	None Detected	µg/L	2.
Di-n-butyl phthalate	None Detected	µg/L	2.
1,2-Dichlorobenzene	None Detected	µg/L	2.
1,3-Dichlorobenzene	None Detected	µg/L	2.
1,4-Dichlorobenzene	None Detected	µg/L	2.
3,3-Dichlorobenzidine	None Detected	µg/L	10.
Dieldrin	None Detected	µg/L	3.
Diethyl phthalate	None Detected	µg/L	2.
Dimethyl phthalate	None Detected	µg/L	2.

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Sample Description: GREGORY CANYON, GLA-5, 03/13/2001 @ 09:10

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
2,4-Dinitrotoluene	None Detected	µg/L	2.
2,6-Dinitrotoluene	None Detected	µg/L	2.
Di-n-octylphthalate	None Detected	µg/L	2.
1,2-Diphenylhydrazine	None Detected	µg/L	2.
Endosulfan I	None Detected	µg/L	10.
Endosulfan II	None Detected	µg/L	10.
Endosulfan sulfate	None Detected	µg/L	3.
Endrin	None Detected	µg/L	2.
Endrin aldehyde	None Detected	µg/L	10.
Fluoranthene	None Detected	µg/L	2.
Fluorene	None Detected	µg/L	2.
Heptachlor	None Detected	µg/L	2.
Heptachlor epoxide	None Detected	µg/L	2.
Hexachlorobenzene	None Detected	µg/L	2.
Hexachlorobutadiene	None Detected	µg/L	2.
Hexachlorocyclopentadiene	None Detected	µg/L	2.
Hexachloroethane	None Detected	µg/L	2.
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.
Isophorone	None Detected	µg/L	2.
2-Methylnaphthalene	None Detected	µg/L	2.
Naphthalene	None Detected	µg/L	2.
2-Naphthylamine	None Detected	µg/L	20.
2-Nitroaniline	None Detected	µg/L	2.
3-Nitroaniline	None Detected	µg/L	2.
4-Nitroaniline	None Detected	µg/L	5.
Nitrobenzene	None Detected	µg/L	2.
n-Nitrosodimethylamine	None Detected	µg/L	2.
n-Nitrosodiphenylamine	None Detected	µg/L	2.
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.
Phenanthrene	None Detected	µg/L	2.
Pyrene	None Detected	µg/L	2.
1,2,4-Trichlorobenzene	None Detected	µg/L	2.
4-Chloro-3-methylphenol	None Detected	µg/L	5.
2-Chlorophenol	None Detected	µg/L	2.
2,4-Dichlorophenol	None Detected	µg/L	2.
2,4-Dimethylphenol	None Detected	µg/L	2.
2,4-Dinitrophenol	None Detected	µg/L	10.
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.
2-Methylphenol	None Detected	µg/L	2.
3- & 4-Methylphenol	None Detected	µg/L	2.
2-Nitrophenol	None Detected	µg/L	2.
4-Nitrophenol	None Detected	µg/L	2.
Pentachlorophenol	None Detected	µg/L	10.
Phenol	None Detected	µg/L	2.

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Sample Description: GREGORY CANYON, GLA-5, 03/13/2001 @ 09:10

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	
Acetophenone	None Detected	µg/L	10.	
2-Acetylaminofluorene	None Detected	µg/L	10.	
4-Aminobiphenyl	None Detected	µg/L	20.	
2,6-Dichlorophenol	None Detected	µg/L	10.	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	
Diphenylamine	None Detected	µg/L	10.	
Ethyl methanesulfonate	None Detected	µg/L	10.	
Kepone	None Detected	µg/L	20.	
Methapyrilene	None Detected	µg/L	10.	*03
3-Methylcholanthrene	None Detected	µg/L	10.	
Methyl methanesulfonate	None Detected	µg/L	10.	
1,4-Napthoquinone	None Detected	µg/L	20.	
1-Napthylamine	None Detected	µg/L	20.	
5-Nitro-o-toluidine	None Detected	µg/L	10.	
n-Nitrosodibutylamine	None Detected	µg/L	10.	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	
n-Nitrosopiperidine	None Detected	µg/L	10.	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	
Pentachlorobenzene	None Detected	µg/L	10.	
Pentachloronitrobenzene	None Detected	µg/L	10.	
Phenacetin	None Detected	µg/L	10.	
1,4-Phenylenediamine	None Detected	µg/L	20.	
Pronamide	None Detected	µg/L	10.	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	
o-Toluidine	None Detected	µg/L	10.	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	59.	21-100
Phenol-d5	50.	10-94
Nitrobenzene-d5	87.	35-114
2-Fluorobiphenyl	76.	43-116
2,4,6-Tribromophenol	98.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-7

Sample Description: GREGORY CANYON, GLA-5, 03/13/2001 @ 09:10

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	89.	33-141

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186, AZ License: AZ0345

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:35
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Acenaphthene	None Detected	µg/L	2.
Acenaphthylene	None Detected	µg/L	2.
Aldrin	None Detected	µg/L	2.
Aniline	None Detected	µg/L	5.
Anthracene	None Detected	µg/L	2.
Benzidine	None Detected	µg/L	20.
Benzo (a) anthracene	None Detected	µg/L	2.
Benzo (b) fluoranthene	None Detected	µg/L	2.
Benzo (k) fluoranthene	None Detected	µg/L	2.
Benzo (a) pyrene	None Detected	µg/L	2.
Benzo (ghi) perylene	None Detected	µg/L	2.
Benzoic Acid	None Detected	µg/L	10.
Benzyl alcohol	None Detected	µg/L	2.
Butyl Benzyl phthalate	None Detected	µg/L	2.
alpha-BHC	None Detected	µg/L	2.
beta-BHC	None Detected	µg/L	2.
delta-BHC	None Detected	µg/L	2.
gamma-BHC	None Detected	µg/L	2.
bis(2-chloroethyl)ether	None Detected	µg/L	2.
bis(2-chloroethoxy)methane	None Detected	µg/L	2.
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.
4-Bromophenyl phenyl ether	None Detected	µg/L	2.
4-Chloroaniline	None Detected	µg/L	2.
2-Chloronaphthalene	None Detected	µg/L	2.
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.
Chrysene	None Detected	µg/L	2.
4,4-DDD'	None Detected	µg/L	2.
4,4-DDE'	None Detected	µg/L	3.
4,4-DDT'	None Detected	µg/L	2.
Dibenzo (a,h) anthracene	None Detected	µg/L	3.
Dibenzofuran	None Detected	µg/L	2.
Di-n-butyl phthalate	None Detected	µg/L	2.
1,2-Dichlorobenzene	None Detected	µg/L	2.
1,3-Dichlorobenzene	None Detected	µg/L	2.
1,4-Dichlorobenzene	None Detected	µg/L	2.
3,3-Dichlorobenzidine	None Detected	µg/L	10.
Dieldrin	None Detected	µg/L	3.
Diethyl phthalate	None Detected	µg/L	2.
Dimethyl phthalate	None Detected	µg/L	2.

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Sample Description: GREGORY CANYON, SW-1, 03/13/2001 @ 13:35

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
2,4-Dinitrotoluene	None Detected	µg/L	2.
2,6-Dinitrotoluene	None Detected	µg/L	2.
Di-n-octylphthalate	None Detected	µg/L	2.
1,2-Diphenylhydrazine	None Detected	µg/L	2.
Endosulfan I	None Detected	µg/L	10.
Endosulfan II	None Detected	µg/L	10.
Endosulfan sulfate	None Detected	µg/L	3.
Endrin	None Detected	µg/L	2.
Endrin aldehyde	None Detected	µg/L	10.
Fluoranthene	None Detected	µg/L	2.
Fluorene	None Detected	µg/L	2.
Heptachlor	None Detected	µg/L	2.
Heptachlor epoxide	None Detected	µg/L	2.
Hexachlorobenzene	None Detected	µg/L	2.
Hexachlorobutadiene	None Detected	µg/L	2.
Hexachlorocyclopentadiene	None Detected	µg/L	2.
Hexachloroethane	None Detected	µg/L	2.
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.
Isophorone	None Detected	µg/L	2.
2-Methylnaphthalene	None Detected	µg/L	2.
Naphthalene	None Detected	µg/L	2.
2-Naphthylamine	None Detected	µg/L	20.
2-Nitroaniline	None Detected	µg/L	2.
3-Nitroaniline	None Detected	µg/L	2.
4-Nitroaniline	None Detected	µg/L	5.
Nitrobenzene	None Detected	µg/L	2.
n-Nitrosodimethylamine	None Detected	µg/L	2.
n-Nitrosodiphenylamine	None Detected	µg/L	2.
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.
Phenanthrene	None Detected	µg/L	2.
Pyrene	None Detected	µg/L	2.
1,2,4-Trichlorobenzene	None Detected	µg/L	2.
4-Chloro-3-methylphenol	None Detected	µg/L	5.
2-Chlorophenol	None Detected	µg/L	2.
2,4-Dichlorophenol	None Detected	µg/L	2.
2,4-Dimethylphenol	None Detected	µg/L	2.
2,4-Dinitrophenol	None Detected	µg/L	10.
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.
2-Methylphenol	None Detected	µg/L	2.
3- & 4-Methylphenol	None Detected	µg/L	2.
2-Nitrophenol	None Detected	µg/L	2.
4-Nitrophenol	None Detected	µg/L	2.
Pentachlorophenol	None Detected	µg/L	10.
Phenol	None Detected	µg/L	2.

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Sample Description: GREGORY CANYON, SW-1, 03/13/2001 @ 13:35

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	
Acetophenone	None Detected	µg/L	10.	
2-Acetylaminofluorene	None Detected	µg/L	10.	
4-Aminobiphenyl	None Detected	µg/L	20.	
2,6-Dichlorophenol	None Detected	µg/L	10.	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	
Diphenylamine	None Detected	µg/L	10.	
Ethyl methanesulfonate	None Detected	µg/L	10.	
Kepone	None Detected	µg/L	20.	
Methapyrilene	None Detected	µg/L	10.	*03
3-Methylcholanthrene	None Detected	µg/L	10.	
Methyl methanesulfonate	None Detected	µg/L	10.	
1,4-Napthoquinone	None Detected	µg/L	20.	
1-Napthylamine	None Detected	µg/L	20.	
5-Nitro-o-toluidine	None Detected	µg/L	10.	
n-Nitrosodibutylamine	None Detected	µg/L	10.	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	
n-Nitrosopiperidine	None Detected	µg/L	10.	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	
Pentachlorobenzene	None Detected	µg/L	10.	
Pentachloronitrobenzene	None Detected	µg/L	10.	
Phenacetin	None Detected	µg/L	10.	
1,4-Phenylenediamine	None Detected	µg/L	20.	
Pronamide	None Detected	µg/L	10.	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	
o-Toluidine	None Detected	µg/L	10.	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	54.	21-100
Phenol-d5	42.	10-94
Nitrobenzene-d5	83.	35-114
2-Fluorobiphenyl	73.	43-116
2,4,6-Tribromophenol	97.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 03/28/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-8

Sample Description: GREGORY CANYON, SW-1, 03/13/2001 @ 13:35

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	89.	33-141

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186, AZ License: AZ0345

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: Sewer Effluent

Date Collected: 03/13/2001 @ 13:10
Date Extracted: 03/16/2001
Date Analyzed: 03/23/2001 @ 01:07
Analyst: SKC
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.23
Acenaphthylene	None Detected	µg/L	2.	0.36
Aldrin	None Detected	µg/L	2.	0.27
Aniline	None Detected	µg/L	5.	1.8
Anthracene	None Detected	µg/L	2.	0.22
Benzidine	None Detected	µg/L	20.	0.16
Benzo (a) anthracene	None Detected	µg/L	2.	0.27
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64
Benzo (a) pyrene	None Detected	µg/L	2.	0.35
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25
Benzoic Acid	None Detected	µg/L	10.	0.84
Benzyl alcohol	None Detected	µg/L	2.	0.66
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24
alpha-BHC	None Detected	µg/L	2.	0.24
beta-BHC	None Detected	µg/L	2.	0.23
delta-BHC	None Detected	µg/L	2.	0.26
gamma-BHC	None Detected	µg/L	2.	0.21
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.33
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.28
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31
Chrysene	None Detected	µg/L	2.	0.20
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.75
4,4-DDT'	None Detected	µg/L	2.	0.22
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30
Dibenzofuran	None Detected	µg/L	2.	0.29
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35
Dieldrin	None Detected	µg/L	3.	0.43
Diethyl phthalate	None Detected	µg/L	2.	0.29
Dimethyl phthalate	None Detected	µg/L	2.	0.25

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Sample Description: GREGORY CANYON, SW-2, 03/13/2001 @ 13:10

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.0
Endosulfan II	None Detected	µg/L	10.	0.78
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.54
Fluoranthene	None Detected	µg/L	2.	0.25
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.27
Hexachlorobutadiene	None Detected	µg/L	2.	0.35
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.24
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.73
3-Nitroaniline	None Detected	µg/L	2.	1.4
4-Nitroaniline	None Detected	µg/L	5.	1.1
Nitrobenzene	None Detected	µg/L	2.	0.23
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23
2-Chlorophenol	None Detected	µg/L	2.	0.16
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Sample Description: GREGORY CANYON, SW-2, 03/13/2001 @ 13:10

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24	
Acetophenone	None Detected	µg/L	10.	0.120	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459	
4-Aminobiphenyl	None Detected	µg/L	20.	0.164	
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248	
Diphenylamine	None Detected	µg/L	10.	0.081	
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170	
Kepone	None Detected	µg/L	20.	2.466	
Methapyrilene	None Detected	µg/L	10.	0.869	*03
3-Methylcholanthrene	None Detected	µg/L	10.	0.148	
Methyl methanesulfonate	None Detected	µg/L	10.	0.128	
1,4-Napthoquinone	None Detected	µg/L	20.	0.473	
1-Napthylamine	None Detected	µg/L	20.	0.182	
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062	
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253	
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158	
Pentachlorobenzene	None Detected	µg/L	10.	0.124	
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167	
Phenacetin	None Detected	µg/L	10.	0.127	
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484	
Pronamide	None Detected	µg/L	10.	0.134	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239	
o-Toluidine	None Detected	µg/L	10.	0.072	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	58.	21-100
Phenol-d5	44.	10-94
Nitrobenzene-d5	85.	35-114
2-Fluorobiphenyl	74.	43-116
2,4,6-Tribromophenol	95.	10-123
d14-Terphenyl	84.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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1360 VALLEY VISTA DRIVE
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Attn: RANDY BAUER 909-860-7777

Date Reported: 04/19/2001
Date Received: 03/14/2001
Laboratory No.: 01-03004-9

Sample Description: GREGORY CANYON, SW-2, 03/13/2001 @ 13:10

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*WATER

Samples Affected: 01-03004-1 - 01-03004-6

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Magnesium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Sodium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Sulfate	n.a.	03/15/2001	MMT	EPA-300.0	03/15/2001	MMT
Chloride	n.a.	03/15/2001	MMT	EPA-300.0	03/15/2001	MMT
Nitrate as N	n.a.	03/15/2001	DPC	EPA-300.0	03/15/2001	DPC
pH	n.a.	03/15/2001	ZJH	EPA-9040	03/15/2001	ZJH
Total Dissolved Solids @ 180 C	n.a.	03/16/2001	HPR	EPA-160.1	03/16/2001	HPR
Total Cyanide	EPA-335.3	03/15/2001	MET	EPA-9012	03/16/2001	TDC
Total Sulfide	n.a.	03/16/2001	JWH2	EPA-376.2	03/16/2001	JWH2

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*WATER

Samples Affected: 01-03004-1 - 01-03004-6

Constituents	Method Blank Readings	Units
Calcium	< 0.050	mg/L
Magnesium	< 0.050	mg/L
Sodium	< 0.50	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*WATER

Samples Affected: 01-03004-1 - 01-03004-6

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	DISS-3004-1	82.27	84.96	92.44	92.11	10.20	10.20	mg/L	3.	0.	20	H MEAN	H MEAN	85 - 115
Magnesium	DISS-3004-1	46.12	47.51	57.09	56.97	10.20	10.20	mg/L	3.	0.	20	H MEAN	H MEAN	85 - 115
Sodium	DISS-3004-1	100.7	103.9	110.6	110.7	10.20	10.20	mg/L	3.	0.	20	H MEAN	H MEAN	85 - 115
Sulfate	03004-1	69.57	69.88	269.8	270.8	100.0	100.0	mg/L	0.	0.	10	100.	101.	80 - 120
Chloride	03004-1	159.4	160.1	367.4	368.2	100.0	100.0	mg/L	0.	0.	10	104.	104.	80 - 120
Nitrate as N	03004-1	15.46	15.47	20.32	20.37	5.000	5.000	mg/L	0.	0.	10	97.	98.	80 - 120
pH	3004-1	7.56	7.55					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	3000-2	660.0	675.0					mg/L	2.		10			
Total Cyanide	W-TOTAL-03004-	< 0.02	< 0.02	0.2670	0.2670	0.2500	0.2500	mg/L	<PQL	0.	10	107.	107.	90 - 110
Total Sulfide	3004-1	< 0.1	< 0.1	0.5679	0.5619	0.5556	0.5556	mg/L	<PQL	1.	10	99.	98.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-7*WATER

Samples Affected: 01-03004-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Magnesium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Sodium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Sulfate	n.a.	03/15/2001	MMT	EPA-300.0	03/15/2001	MMT
Chloride	n.a.	03/15/2001	MMT	EPA-300.0	03/15/2001	MMT
Nitrate as N	n.a.	03/15/2001	DPC	EPA-300.0	03/15/2001	DPC
pH	n.a.	03/15/2001	ZJH	EPA-9040	03/15/2001	ZJH
Total Dissolved Solids @ 180 C	n.a.	03/16/2001	HPR	EPA-160.1	03/16/2001	HPR
Total Cyanide	EPA-335.3	03/15/2001	MET	EPA-9012	03/16/2001	TDC
Total Sulfide	n.a.	03/16/2001	JWH2	EPA-376.2	03/16/2001	JWH2

Quality Control Officer

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-7*WATER

Samples Affected: 01-03004-7

Constituents	Method Blank Readings	Units
Calcium	< 0.050	mg/L
Magnesium	< 0.050	mg/L
Sodium	0.077	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

The trace detection for Sodium is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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B C LABORATORIES
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BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-7*WATER

Samples Affected: 01-03004-7

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	TAD-2952-1	38.18	37.88	49.03	49.05	10.20	10.20	mg/L	1.	0.	20	106.	107.	85 - 115
Magnesium	TAD-2952-1	4.140	4.114	15.63	15.60	10.20	10.20	mg/L	1.	0.	20	113.	112.	85 - 115
Sodium	TAD-2952-1	25.08	24.90	36.50	36.18	10.20	10.20	mg/L	1.	1.	20	112.	109.	85 - 115
Sulfate	03004-1	69.57	69.88	269.8	270.8	100.0	100.0	mg/L	0.	0.	10	100.	101.	80 - 120
Chloride	03004-1	159.4	160.1	367.4	368.2	100.0	100.0	mg/L	0.	0.	10	104.	104.	80 - 120
Nitrate as N	03004-1	15.46	15.47	20.32	20.37	5.000	5.000	mg/L	0.	0.	10	97.	98.	80 - 120
pH	3004-1	7.56	7.55					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	3000-2	660.0	675.0					mg/L	2.		10			
Total Cyanide	W-TOTAL-03004-	< 0.02	< 0.02	0.2670	0.2670	0.2500	0.2500	mg/L	<PQL	0.	10	107.	107.	90 - 110
Total Sulfide	3004-1	< 0.1	< 0.1	0.5679	0.5619	0.5556	0.5556	mg/L	<PQL	1.	10	99.	98.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

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(Preparation & Analysis Information)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200103004-8*WATER

Samples Affected: 01-03004-8, 01-03004-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Magnesium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Sodium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Sulfate	n.a.	03/15/2001	MMT	EPA-300.0	03/15/2001	MMT
Chloride	n.a.	03/15/2001	MMT	EPA-300.0	03/15/2001	MMT
Nitrate as N	n.a.	03/15/2001	DPC	EPA-300.0	03/15/2001	DPC
pH	n.a.	03/15/2001	ZJH	EPA-9040	03/15/2001	ZJH
Total Dissolved Solids @ 180 C	n.a.	03/16/2001	HPR	EPA-160.1	03/16/2001	HPR
Total Cyanide	EPA-335.3	03/15/2001	MET	EPA-9012	03/16/2001	TDC
Total Sulfide	n.a.	03/16/2001	JWH2	EPA-376.2	03/16/2001	JWH2

Quality Control Officer

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200103004-8*WATER

Samples Affected: 01-03004-8, 01-03004-9

Constituents	Method Blank Readings	Units
Calcium	< 0.050	mg/L
Magnesium	< 0.050	mg/L
Sodium	0.077	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

The trace detection for Sodium is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200103004-8*WATER

Samples Affected: 01-03004-8, 01-03004-9

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	TAD-2952-1	38.18	37.88	49.03	49.05	10.20	10.20	mg/L	1.	0.	20	106.	107.	85 - 115
Magnesium	TAD-2952-1	4.140	4.114	15.63	15.60	10.20	10.20	mg/L	1.	0.	20	113.	112.	85 - 115
Sodium	TAD-2952-1	25.08	24.90	36.50	36.18	10.20	10.20	mg/L	1.	1.	20	112.	109.	85 - 115
Sulfate	03004-1	69.57	69.88	269.8	270.8	100.0	100.0	mg/L	0.	0.	10	100.	101.	80 - 120
Chloride	03004-1	159.4	160.1	367.4	368.2	100.0	100.0	mg/L	0.	0.	10	104.	104.	80 - 120
Nitrate as N	03004-1	15.46	15.47	20.32	20.37	5.000	5.000	mg/L	0.	0.	10	97.	98.	80 - 120
pH	3004-1	7.56	7.55					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	3004-8	626.7	633.3					mg/L	1.		10			
Total Cyanide	W-TOTAL-03004-	< 0.02	< 0.02	0.2670	0.2670	0.2500	0.2500	mg/L	<PQL	0.	10	107.	107.	90 - 110
Total Sulfide	3004-1	< 0.1	< 0.1	0.5679	0.5619	0.5556	0.5556	mg/L	<PQL	1.	10	99.	98.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*METAL

Samples Affected: 01-03004-1 - 01-03004-6

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7060	03/23/2001	TMS
Dissolved Barium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Copper	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/20/2001	JCC
Dissolved Lead	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7421	03/23/2001	TMS
Dissolved Mercury	EPA-7470	03/16/2001	DMM2	EPA-7470	03/16/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7740	03/23/2001	TMS
Dissolved Silver	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Tin	EPA-600-4-79-02	03/13/2001	FIELD	EPA-282.2	03/26/2001	DIW
Dissolved Thallium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7841	03/20/2001	DIW
Dissolved Vanadium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/16/2001	ARD

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*METAL

Samples Affected: 01-03004-1 - 01-03004-6

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<100.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 5.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 2.	µg/L
Dissolved Silver	<10.	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	<10.	µg/L

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*METAL

Samples Affected: 01-03004-1 - 01-03004-6

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	DISS-3004-1	<100.	<100.	467.7	473.7	408.2	408.2	µg/L	<PQL	1.	20	113.	115.	85 - 115
Dissolved Arsenic	DISS-3004-1	0.91	1.274	23.77	24.47	26.32	26.32	µg/L	<PQL	3.	20	87.	90.	85 - 115
Dissolved Barium	DISS-3004-1	122.2	126.4	343.5	344.0	204.1	204.1	µg/L	<PQL	0.	20	108.	109.	85 - 115
Dissolved Beryllium	DISS-3004-1	< 10.	< 10.	213.1	212.1	204.1	204.1	µg/L	<PQL	0.	20	105.	104.	85 - 115
Dissolved Cadmium	DISS-3004-1	< 10.	< 10.	223.6	223.4	204.1	204.1	µg/L	<PQL	0.	20	112.	111.	85 - 115
Dissolved Chromium	DISS-3004-1	< 10.	< 10.	219.1	214.4	204.1	204.1	µg/L	<PQL	2.	20	108.	105.	85 - 115
Dissolved Cobalt	DISS-3004-1	< 50.	< 50.	224.8	221.6	204.1	204.1	µg/L	<PQL	1.	20	111.	109.	85 - 115
Dissolved Copper	DISS-3004-1-CU	< 10.	< 10.	194.5	205.7	204.1	204.1	µg/L	<PQL	6.	20	95.	100.	85 - 115
Dissolved Lead	DISS-3004-1	< 1.	< 1.	27.50	27.75	26.32	26.32	µg/L	<PQL	1.	20	103.	104.	85 - 115
Dissolved Mercury	DISS-03004-1	< 0.2	< 0.2	0.9683	1.070	1.000	1.000	µg/L	<PQL	10.	20	97.	107.	70 - 130
Dissolved Nickel	DISS-3004-1	< 10.	< 10.	432.7	426.5	408.2	408.2	µg/L	<PQL	1.	20	105.	103.	85 - 115
Dissolved Selenium	DISS-3004-1	< 2.	< 2.	25.33	25.58	26.32	26.32	µg/L	<PQL	1.	20	93.	94.	85 - 115
Dissolved Silver	DISS-3004-1	< 10.	< 10.	209.5	216.2	204.1	204.1	µg/L	<PQL	3.	20	103.	106.	85 - 115
Dissolved Tin	DISS-3004-2-X4	< 20.	< 20.	190.7	191.2	210.5	210.5	µg/L	<PQL	0.	20	92.	92.	85 - 115
Dissolved Thallium	DISS-3004-1	< 1.	< 1.	23.96	24.18	26.32	26.32	µg/L	<PQL	1.	20	91.	92.	85 - 115
Dissolved Vanadium	DISS-3004-1	28.30	28.50	254.3	250.4	204.1	204.1	µg/L	<PQL	2.	20	111.	109.	85 - 115
Dissolved Zinc	DISS-3004-1	< 10.	< 10.	228.3	227.9	204.1	204.1	µg/L	<PQL	0.	20	112.	112.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-7*METAL

Samples Affected: 01-03004-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/21/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7060	03/23/2001	TMS
Dissolved Barium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Copper	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/20/2001	JCC
Dissolved Lead	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7421	03/23/2001	TMS
Dissolved Mercury	EPA-7470	03/16/2001	DMM2	EPA-7470	03/16/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7740	03/23/2001	TMS
Dissolved Silver	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Tin	EPA-600-4-79-02	03/13/2001	FIELD	EPA-282.2	03/26/2001	DIW
Dissolved Thallium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7841	03/20/2001	DIW
Dissolved Vanadium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/21/2001	ARD

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-7*METAL

Samples Affected: 01-03004-7

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<100.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 5.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 2.	µg/L
Dissolved Silver	<10.	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	<10.	µg/L

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-7*METAL

Samples Affected: 01-03004-7

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	DISS-3062-7	<100.	<100.	431.0	441.8	408.2	408.2	µg/L	<PQL	2.	20	106.	108.	85 - 115
Dissolved Arsenic	DISS-3004-1	0.91	1.274	23.77	24.47	26.32	26.32	µg/L	<PQL	3.	20	87.	90.	85 - 115
Dissolved Barium	TAD-2952-1	93.70	93.90	323.9	322.2	204.1	204.1	µg/L	<PQL	1.	20	113.	112.	85 - 115
Dissolved Beryllium	TAD-2952-1	< 10.	< 10.	219.2	217.6	204.1	204.1	µg/L	<PQL	1.	20	108.	107.	85 - 115
Dissolved Cadmium	TAD-2952-1	< 10.	< 10.	230.7	227.8	204.1	204.1	µg/L	<PQL	1.	20	112.	111.	85 - 115
Dissolved Chromium	TAD-2952-1	5.000	< 10.	235.0	235.5	204.1	204.1	µg/L	<PQL	0.	20	113.	113.	85 - 115
Dissolved Cobalt	TAD-2952-1	< 50.	< 50.	229.0	229.2	204.1	204.1	µg/L	<PQL	0.	20	112.	113.	85 - 115
Dissolved Copper	DISS-3004-1-CU	< 10.	< 10.	194.5	205.7	204.1	204.1	µg/L	<PQL	6.	20	95.	100.	85 - 115
Dissolved Lead	DISS-3004-1	< 1.	< 1.	27.50	27.75	26.32	26.32	µg/L	<PQL	1.	20	103.	104.	85 - 115
Dissolved Mercury	DISS-03004-1	< 0.2	< 0.2	0.9683	1.070	1.000	1.000	µg/L	<PQL	10.	20	97.	107.	70 - 130
Dissolved Nickel	TAD-2952-1	< 10.	< 10.	445.3	442.6	408.2	408.2	µg/L	<PQL	1.	20	108.	108.	85 - 115
Dissolved Selenium	DISS-3004-1	< 2.	< 2.	25.33	25.58	26.32	26.32	µg/L	<PQL	1.	20	93.	94.	85 - 115
Dissolved Silver	TAD-2952-1	8.200	4.900	231.2	231.4	204.1	204.1	µg/L	<PQL	0.	20	109.	109.	85 - 115
Dissolved Tin	DISS-3004-2-X4	< 20.	< 20.	190.7	191.2	210.5	210.5	µg/L	<PQL	0.	20	92.	92.	85 - 115
Dissolved Thallium	DISS-3004-1	< 1.	< 1.	23.96	24.18	26.32	26.32	µg/L	<PQL	1.	20	91.	92.	85 - 115
Dissolved Vanadium	TAD-2952-1	< 10.	< 10.	234.7	232.9	204.1	204.1	µg/L	<PQL	1.	20	113.	112.	85 - 115
Dissolved Zinc	DISS-3062-7	15.40	16.20	217.8	226.6	204.1	204.1	µg/L	<PQL	4.	20	99.	103.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200103004-8*METAL

Samples Affected: 01-03004-8, 01-03004-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/21/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7060	03/23/2001	TMS
Dissolved Barium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Copper	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/20/2001	JCC
Dissolved Lead	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7421	03/23/2001	TMS
Dissolved Mercury	EPA-7470	03/16/2001	DMM2	EPA-7470	03/16/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7740	03/23/2001	TMS
Dissolved Silver	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Tin	EPA-600-4-79-02	03/13/2001	FIELD	EPA-282.2	03/26/2001	DIW
Dissolved Thallium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-7841	03/20/2001	DIW
Dissolved Vanadium	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/19/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	03/13/2001	FIELD	EPA-6010	03/21/2001	ARD

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200103004-8*METAL

Samples Affected: 01-03004-8, 01-03004-9

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<100.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 5.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 2.	µg/L
Dissolved Silver	<10.	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	<10.	µg/L

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QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200103004-8*METAL

Samples Affected: 01-03004-8, 01-03004-9

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	DISS-3062-7	<100.	<100.	431.0	441.8	408.2	408.2	µg/L	<PQL	2.	20	106.	108.	85 - 115
Dissolved Arsenic	DISS-3004-1	0.91	1.274	23.77	24.47	26.32	26.32	µg/L	<PQL	3.	20	87.	90.	85 - 115
Dissolved Barium	TAD-2952-1	93.70	93.90	323.9	322.2	204.1	204.1	µg/L	<PQL	1.	20	113.	112.	85 - 115
Dissolved Beryllium	TAD-2952-1	< 10.	< 10.	219.2	217.6	204.1	204.1	µg/L	<PQL	1.	20	108.	107.	85 - 115
Dissolved Cadmium	TAD-2952-1	< 10.	< 10.	230.7	227.8	204.1	204.1	µg/L	<PQL	1.	20	112.	111.	85 - 115
Dissolved Chromium	TAD-2952-1	5.000	< 10.	235.0	235.5	204.1	204.1	µg/L	<PQL	0.	20	113.	113.	85 - 115
Dissolved Cobalt	TAD-2952-1	< 50.	< 50.	229.0	229.2	204.1	204.1	µg/L	<PQL	0.	20	112.	113.	85 - 115
Dissolved Copper	DISS-2849-1-X5	<5000.	<5000.	117300.	116500.	102000.	102000.	µg/L	<PQL	1.	20	115.	114.	85 - 115
Dissolved Lead	DISS-3004-1	< 1.	< 1.	27.50	27.75	26.32	26.32	µg/L	<PQL	1.	20	103.	104.	85 - 115
Dissolved Mercury	DISS-03004-1	< 0.2	< 0.2	0.9683	1.070	1.000	1.000	µg/L	<PQL	10.	20	97.	107.	70 - 130
Dissolved Nickel	TAD-2952-1	< 10.	< 10.	445.3	442.6	408.2	408.2	µg/L	<PQL	1.	20	108.	108.	85 - 115
Dissolved Selenium	DISS-3004-1	< 2.	< 2.	25.33	25.58	26.32	26.32	µg/L	<PQL	1.	20	93.	94.	85 - 115
Dissolved Silver	TAD-2952-1	8.200	4.900	231.2	231.4	204.1	204.1	µg/L	<PQL	0.	20	109.	109.	85 - 115
Dissolved Tin	DISS-3004-2-X4	< 20.	< 20.	190.7	191.2	210.5	210.5	µg/L	<PQL	0.	20	92.	92.	85 - 115
Dissolved Thallium	DISS-3004-1	< 1.	< 1.	23.96	24.18	26.32	26.32	µg/L	<PQL	1.	20	91.	92.	85 - 115
Dissolved Vanadium	TAD-2952-1	< 10.	< 10.	234.7	232.9	204.1	204.1	µg/L	<PQL	1.	20	113.	112.	85 - 115
Dissolved Zinc	DISS-3062-7	15.40	16.20	217.8	226.6	204.1	204.1	µg/L	<PQL	4.	20	99.	103.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/14/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8080

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8080 compounds	EPA-3510	03/16/2001	PSM/JST	EPA-8080	03/27/2001	SB

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8080

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
Aldrin	< 0.005	µg/L
alpha-BHC	< 0.005	µg/L
beta-BHC	< 0.005	µg/L
delta-BHC	< 0.005	µg/L
gamma-BHC	< 0.005	µg/L
Chlordane (Technical)	< 0.1	µg/L
4,4'-DDD	< 0.005	µg/L
4,4'-DDE	< 0.005	µg/L
4,4'-DDT	< 0.005	µg/L
Dieldrin	< 0.005	µg/L
Endosulfan I	< 0.005	µg/L
Endosulfan II	< 0.005	µg/L
Endosulfan Sulfate	< 0.005	µg/L
Endrin	< 0.005	µg/L
Endrin Aldehyde	< 0.01	µg/L
Heptachlor	< 0.005	µg/L
Heptachlor Epoxide	< 0.005	µg/L
Hexachlorocyclopentadiene	< 0.01	µg/L
Methoxychlor	< 0.005	µg/L
Toxaphene	< 2.	µg/L
PCB-1016	< 0.2	µg/L
PCB-1221	< 0.2	µg/L
PCB-1232	< 0.2	µg/L
PCB-1242	< 0.2	µg/L
PCB-1248	< 0.2	µg/L
PCB-1254	< 0.2	µg/L
PCB-1260	< 0.2	µg/L
Total PCB's (Summation)	< 0.2	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8080

Samples Affected: 01-03004-1 - 01-03004-9

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8080

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Aldrin	MS 3/16/01	< 0.005	0.272	0.239	0.250	0.250	µg/L	13.	24	109.	95.	45 - 130
gamma-BHC	MS 3/16/01	< 0.005	0.258	0.233	0.250	0.250	µg/L	10.	23	103.	93.	43 - 112
4,4'-DDT	MS 3/16/01	< 0.005	0.256	0.228	0.250	0.250	µg/L	12.	28	102.	91.	52 - 143
Dieldrin	MS 3/16/01	< 0.005	0.252	0.228	0.250	0.250	µg/L	10.	26	101.	91.	60 - 133
Endrin	MS 3/16/01	< 0.005	0.250	0.225	0.250	0.250	µg/L	11.	29	100.	90.	59 - 146
Heptachlor	MS 3/16/01	< 0.005	0.273	0.246	0.250	0.250	µg/L	10.	22	109.	99.	56 - 127

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8150

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8150 compounds	EPA-3510	03/16/2001	PSM/JST	EPA-8150	03/22/2001	KMS

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/12/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8150

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
2,4-D	< 0.4	µg/L
Dinoseb	< 0.2	µg/L
2,4,5-T	< 0.09	µg/L
2,4,5-TP (Silvex)	< 0.07	µg/L

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Method 8150

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8150

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
2,4-D	MS 3/16/01	< 0.4	1.610	2.304	2.000	2.000	µg/L	35.	30	80.	115.	52 - 110
Dinoseb	MS 3/16/01	< 0.2	0.519	0.507	1.000	1.000	µg/L	2.	30	52.	51.	41 - 86
2,4,5-T	MS 3/16/01	< 0.09	0.457	0.566	0.600	0.600	µg/L	21.	30	76.	94.	50 - 104
2,4,5-TP (Silvex)	MS 3/16/01	< 0.07	0.449	0.567	0.600	0.600	µg/L	23.	30	75.	95.	56 - 101

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

The spike RPD and the matrix spike duplicate recoveries for 2,4-D are outside QC limits.

Quality Control Officer

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(Preparation & Analysis Information)
Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8260

Samples Affected: 01-03004-1 - 01-03004-2

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 Compound #1-2	EPA-5030	03/24/2001	MC	EPA-8260	03/24/2001	MC

Quality Control Officer

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8260

Samples Affected: 01-03004-1 - 01-03004-2

Constituents	Method Blank Readings	Units
Benzene	< 0.5	µg/L
Bromobenzene	< 0.5	µg/L
Bromochloromethane	< 0.5	µg/L
Bromodichloromethane	< 0.5	µg/L
Bromoform	< 0.5	µg/L
Bromomethane	< 1.	µg/L
n-Butylbenzene	< 0.5	µg/L
sec-Butylbenzene	< 0.5	µg/L
tert-Butylbenzene	< 0.5	µg/L
Carbon tetrachloride	< 0.5	µg/L
Chlorobenzene	< 0.5	µg/L
Chloroethane	< 0.5	µg/L
Chloroform	< 0.5	µg/L
Chloromethane	< 0.5	µg/L
2-Chlorotoluene	< 0.5	µg/L
4-Chlorotoluene	< 0.5	µg/L
Dibromochloromethane	< 0.5	µg/L
1,2-Dibromo-3-Chloropropane	< 1.	µg/L
1,2-Dibromoethane	< 0.5	µg/L
Dibromomethane	< 0.5	µg/L
1,2-Dichlorobenzene	< 0.5	µg/L
1,3-Dichlorobenzene	< 0.5	µg/L
1,4-Dichlorobenzene	< 0.5	µg/L
Dichlorodifluoromethane	< 0.5	µg/L
1,1-Dichloroethane	< 0.5	µg/L
1,2-Dichloroethane	< 0.5	µg/L
1,1-Dichloroethene	< 0.5	µg/L
cis-1,2-Dichloroethene	< 0.5	µg/L
trans-1,2-Dichloroethene	< 0.5	µg/L

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8260

Samples Affected: 01-03004-1 - 01-03004-2

Constituents	Method Blank Readings	Units
1,2-Dichloropropane	< 0.5	µg/L
1,3-Dichloropropane	< 0.5	µg/L
2,2-Dichloropropane	< 0.5	µg/L
1,1-Dichloropropene	< 0.5	µg/L
cis-1,3-Dichloropropene	< 0.5	µg/L
trans-1,3-Dichloropropene	< 0.5	µg/L
Ethyl Benzene	< 0.5	µg/L
Hexachlorobutadiene	0.23	µg/L
Isopropylbenzene	< 0.5	µg/L
p-Isopropyltoluene	< 0.5	µg/L
Methylene Chloride	< 1.	µg/L
Naphthalene	< 0.5	µg/L
n-Propylbenzene	< 0.5	µg/L
Styrene	< 0.5	µg/L
1,1,1,2-Tetrachloroethane	< 0.5	µg/L
1,1,2,2-Tetrachloroethane	< 0.5	µg/L
Tetrachloroethene	< 0.5	µg/L
Toluene	< 0.5	µg/L
1,2,3-Trichlorobenzene	< 0.5	µg/L
1,2,4-Trichlorobenzene	< 0.5	µg/L
1,1,1-Trichloroethane	< 0.5	µg/L
1,1,2-Trichloroethane	< 0.5	µg/L
Trichloroethene	< 0.5	µg/L
Trichlorofluoromethane	< 0.5	µg/L
1,2,3-Trichloropropane	< 1.	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.5	µg/L
1,2,4-Trimethylbenzene	< 0.5	µg/L
1,3,5-Trimethylbenzene	< 0.5	µg/L

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RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8260

Samples Affected: 01-03004-1 - 01-03004-2

Constituents	Method Blank Readings	Units
Vinyl Chloride	< 0.5	µg/L
Total Xylenes	< 1.	µg/L
m & p-Xylene	< 0.5	µg/L
o-Xylene	< 0.5	µg/L
Acetone	<10.	µg/L
Acetonitrile	<20.	µg/L
Acrolein	<50.	µg/L
Acrylonitrile	<20.	µg/L
Allyl Chloride	< 5.	µg/L
t-Amyl methyl ether	< 1.	µg/L
t-Butyl alcohol	<50.	µg/L
Carbon Disulfide	< 1.	µg/L
Chloroprene	< 5.	µg/L
trans-1,4-Dichloro-2-butene	< 5.	µg/L
Diisopropyl ether	< 1.	µg/L
1,4-Dioxane	<300.	µg/L
Ethyl Methacrylate	<20.	µg/L
2-Hexanone	<20.	µg/L
Iodomethane	< 0.5	µg/L
Isobutyl alcohol	<50.	µg/L
Methacrylonitrile	< 5.	µg/L
Methyl Ethyl Ketone	<20.	µg/L
4-Methyl-2-pentanone	<20.	µg/L
Methyl-t-butylether	< 0.5	µg/L
Propionitrile	<20.	µg/L

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Method 8260

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8260

Samples Affected: 01-03004-1 - 01-03004-2

The trace detection for Hexachlorobutadiene is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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Method 8260

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DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8260

Samples Affected: 01-03004-1 - 01-03004-2

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Benzene	03011-22	< 0.5	25.	25.	25.	25.	µg/L	0.	20	102.	101.	80 - 120
Bromodichloromethane	03011-22	< 0.5	24.	24.	25.	25.	µg/L	0.	20	94.	95.	80 - 120
Chlorobenzene	03011-22	< 0.5	26.	25.	25.	25.	µg/L	2.	20	102.	100.	80 - 120
Chloroethane	03011-22	< 0.5	26.	27.	25.	25.	µg/L	5.	20	103.	108.	80 - 120
1,4-Dichlorobenzene	03011-22	< 0.5	26.	26.	25.	25.	µg/L	1.	20	104.	103.	80 - 120
1,1-Dichloroethane	03011-22	< 0.5	26.	26.	25.	25.	µg/L	1.	20	103.	103.	80 - 120
1,1-Dichloroethene	03011-22	< 0.5	25.	25.	25.	25.	µg/L	0.	20	101.	101.	80 - 120
Toluene	03011-22	< 0.5	26.	25.	25.	25.	µg/L	2.	20	103.	102.	80 - 120
Trichloroethene	03011-22	< 0.5	25.	24.	25.	25.	µg/L	1.	20	99.	97.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

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Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-3*8260

Samples Affected: 01-03004-3 - 01-03004-12TB

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 Compound #3 - 12TB	EPA-5030	03/24/2001	MC	EPA-8260	03/24/2001	MC

Quality Control Officer

Danette Bohm

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Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-3*8260

Samples Affected: 01-03004-3 - 01-03004-12TB

Constituents	Method Blank Readings	Units
Benzene	< 0.5	µg/L
Bromobenzene	< 0.5	µg/L
Bromochloromethane	< 0.5	µg/L
Bromodichloromethane	< 0.5	µg/L
Bromoform	< 0.5	µg/L
Bromomethane	< 1.	µg/L
n-Butylbenzene	< 0.5	µg/L
sec-Butylbenzene	< 0.5	µg/L
tert-Butylbenzene	< 0.5	µg/L
Carbon tetrachloride	< 0.5	µg/L
Chlorobenzene	< 0.5	µg/L
Chloroethane	< 0.5	µg/L
Chloroform	< 0.5	µg/L
Chloromethane	< 0.5	µg/L
2-Chlorotoluene	< 0.5	µg/L
4-Chlorotoluene	< 0.5	µg/L
Dibromochloromethane	< 0.5	µg/L
1,2-Dibromo-3-Chloropropane	< 1.	µg/L
1,2-Dibromoethane	< 0.5	µg/L
Dibromomethane	< 0.5	µg/L
1,2-Dichlorobenzene	< 0.5	µg/L
1,3-Dichlorobenzene	< 0.5	µg/L
1,4-Dichlorobenzene	< 0.5	µg/L
Dichlorodifluoromethane	< 0.5	µg/L
1,1-Dichloroethane	< 0.5	µg/L
1,2-Dichloroethane	< 0.5	µg/L
1,1-Dichloroethene	< 0.5	µg/L
cis-1,2-Dichloroethene	< 0.5	µg/L
trans-1,2-Dichloroethene	< 0.5	µg/L

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(Instrumental & Blank Parameters)
Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-3*8260

Samples Affected: 01-03004-3 - 01-03004-12TB

Constituents	Method Blank Readings	Units
1,2-Dichloropropane	< 0.5	µg/L
1,3-Dichloropropane	< 0.5	µg/L
2,2-Dichloropropane	< 0.5	µg/L
1,1-Dichloropropene	< 0.5	µg/L
cis-1,3-Dichloropropene	< 0.5	µg/L
trans-1,3-Dichloropropene	< 0.5	µg/L
Ethyl Benzene	< 0.5	µg/L
Hexachlorobutadiene	0.23	µg/L
Isopropylbenzene	< 0.5	µg/L
p-Isopropyltoluene	< 0.5	µg/L
Methylene Chloride	< 1.	µg/L
Naphthalene	< 0.5	µg/L
n-Propylbenzene	< 0.5	µg/L
Styrene	< 0.5	µg/L
1,1,1,2-Tetrachloroethane	< 0.5	µg/L
1,1,2,2-Tetrachloroethane	< 0.5	µg/L
Tetrachloroethene	< 0.5	µg/L
Toluene	< 0.5	µg/L
1,2,3-Trichlorobenzene	< 0.5	µg/L
1,2,4-Trichlorobenzene	< 0.5	µg/L
1,1,1-Trichloroethane	< 0.5	µg/L
1,1,2-Trichloroethane	< 0.5	µg/L
Trichloroethene	< 0.5	µg/L
Trichlorofluoromethane	< 0.5	µg/L
1,2,3-Trichloropropane	< 1.	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.5	µg/L
1,2,4-Trimethylbenzene	< 0.5	µg/L
1,3,5-Trimethylbenzene	< 0.5	µg/L

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RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-3*8260

Samples Affected: 01-03004-3 - 01-03004-12TB

Constituents	Method Blank Readings	Units
Vinyl Chloride	< 0.5	µg/L
Total Xylenes	< 1.	µg/L
m & p-Xylene	< 0.5	µg/L
o-Xylene	< 0.5	µg/L
Acetone	<10.	µg/L
Acetonitrile	<20.	µg/L
Acrolein	<50.	µg/L
Acrylonitrile	<20.	µg/L
Allyl Chloride	< 5.	µg/L
t-Amyl methyl ether	< 1.	µg/L
t-Butyl alcohol	<50.	µg/L
Carbon Disulfide	< 1.	µg/L
Chloroprene	< 5.	µg/L
trans-1,4-Dichloro-2-butene	< 5.	µg/L
Diisopropyl ether	< 1.	µg/L
1,4-Dioxane	<300.	µg/L
Ethyl Methacrylate	<20.	µg/L
2-Hexanone	<20.	µg/L
Iodomethane	< 0.5	µg/L
Isobutyl alcohol	<50.	µg/L
Methacrylonitrile	< 5.	µg/L
Methyl Ethyl Ketone	<20.	µg/L
4-Methyl-2-pentanone	<20.	µg/L
Methyl-t-butylether	< 0.5	µg/L
Propionitrile	<20.	µg/L

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-3*8260

Samples Affected: 01-03004-3 - 01-03004-12TB

The trace detection for Hexachlorobutadiene is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/18/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-3*8260

Samples Affected: 01-03004-3 - 01-03004-12TB

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Benzene	OFW	< 0.5	22.	23.	25.	25.	µg/L	3.	20	89.	92.	80 - 120
Bromodichloromethane	OFW	< 0.5	27.	26.	25.	25.	µg/L	4.	20	108.	104.	80 - 120
Chlorobenzene	OFW	< 0.5	26.	25.	25.	25.	µg/L	4.	20	104.	99.	80 - 120
Chloroethane	OFW	< 0.5	22.	25.	25.	25.	µg/L	13.	20	89.	102.	80 - 120
1,4-Dichlorobenzene	OFW	< 0.5	28.	27.	25.	25.	µg/L	4.	20	114.	110.	80 - 120
1,1-Dichloroethane	OFW	< 0.5	24.	25.	25.	25.	µg/L	4.	20	94.	99.	80 - 120
1,1-Dichloroethene	OFW	< 0.5	25.	25.	25.	25.	µg/L	2.	20	99.	102.	80 - 120
Toluene	OFW	< 0.5	26.	24.	25.	25.	µg/L	8.	20	104.	96.	80 - 120
Trichloroethene	OFW	< 0.5	28.	27.	25.	25.	µg/L	4.	20	112.	107.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/10/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 Compounds #1-3,5-7	EPA-3510	03/16/2001	JCM/PSM	EPA-8270	03/22/2001	SKC
Method 8270 Compounds #4,8,9	EPA-3510	03/16/2001	JCM/PSM	EPA-8270	03/23/2001	SKC

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/19/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	W-PB1-03-16-01	< 2.	57.73	60.14	80.00	80.00	µg/L	4.	20	72.	75.	61 - 116
1,4-Dichlorobenzene	W-PB1-03-16-01	< 2.	54.90	60.17	80.00	80.00	µg/L	9.	15	69.	75.	55 - 107
2,4-Dinitrotoluene	W-PB1-03-16-01	< 2.	67.70	68.54	80.00	80.00	µg/L	1.	20	85.	86.	57 - 130
Hexachlorobenzene	W-PB1-03-16-01	< 2.	70.22	70.83	80.00	80.00	µg/L	1.	20	88.	89.	67 - 123
Hexachlorobutadiene	W-PB1-03-16-01	< 2.	45.10	52.16	80.00	80.00	µg/L	15.	16	56.	65.	47 - 102
Hexachloroethane	W-PB1-03-16-01	< 2.	42.76	48.64	80.00	80.00	µg/L	13.	20	53.	61.	35 - 133
Nitrobenzene	W-PB1-03-16-01	< 2.	64.29	68.12	80.00	80.00	µg/L	6.	20	80.	85.	65 - 101
N-Nitrosodi-n-propylamine	W-PB1-03-16-01	< 2.	56.69	58.42	80.00	80.00	µg/L	3.	20	71.	73.	66 - 105
Pyrene	W-PB1-03-16-01	< 2.	64.70	62.37	80.00	80.00	µg/L	4.	10	81.	78.	50 - 125
1,2,4-Trichlorobenzene	W-PB1-03-16-01	< 2.	53.86	60.66	80.00	80.00	µg/L	12.	14	67.	76.	60 - 101
4-Chloro-3-methylphenol	W-PB1-03-16-01	< 5.	68.55	69.23	80.00	80.00	µg/L	1.	20	86.	87.	75 - 113
2-Chlorophenol	W-PB1-03-16-01	< 2.	65.30	65.27	80.00	80.00	µg/L	0.	10	82.	82.	71 - 108
2-Methylphenol	W-PB1-03-16-01	< 2.	59.86	59.32	80.00	80.00	µg/L	1.	10	75.	74.	70 - 104
3- & 4-Methylphenol	W-PB1-03-16-01	< 2.	50.03	48.57	80.00	80.00	µg/L	3.	11	63.	61.	58 - 101
4-Nitrophenol	W-PB1-03-16-01	< 2.	28.37	30.36	80.00	80.00	µg/L	7.	15	35.	38.	29 - 71
Pentachlorophenol	W-PB1-03-16-01	< 10.	68.65	67.15	80.00	80.00	µg/L	2.	11	86.	84.	67 - 142
Phenol	W-PB1-03-16-01	< 2.	34.56	35.10	80.00	80.00	µg/L	2.	12	43.	44.	32 - 63
2,4,6-Trichlorophenol	W-PB1-03-16-01	< 5.	63.91	63.17	80.00	80.00	µg/L	1.	20	80.	79.	59 - 128

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/19/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
Acenaphthene	< 2.	µg/L
Acenaphthylene	< 2.	µg/L
Aldrin	< 2.	µg/L
Aniline	< 5.	µg/L
Anthracene	< 2.	µg/L
Benzidine	<20.	µg/L
Benzo (a) anthracene	< 2.	µg/L
Benzo (b) fluoranthene	< 2.	µg/L
Benzo (k) fluoranthene	< 2.	µg/L
Benzo (a) pyrene	< 2.	µg/L
Benzo (ghi) perylene	< 2.	µg/L
Benzoic Acid	<10.	µg/L
Benzyl alcohol	< 2.	µg/L
Butyl Benzyl phthalate	< 2.	µg/L
alpha-BHC	< 2.	µg/L
beta-BHC	< 2.	µg/L
delta-BHC	< 2.	µg/L
gamma-BHC	< 2.	µg/L
bis(2-chloroethyl)ether	< 2.	µg/L
bis(2-chloroethoxy)methane	< 2.	µg/L
bis(2-chloro-1-methylethyl) et	< 2.	µg/L
bis(2-ethylhexyl)phthalate	< 5.	µg/L
4-Bromophenyl phenyl ether	< 2.	µg/L
4-Chloroaniline	< 2.	µg/L
2-Chloronaphthalene	< 2.	µg/L
4-Chlorophenyl phenyl ether	< 2.	µg/L
Chrysene	< 2.	µg/L
4,4-DDD'	< 2.	µg/L
4,4-DDE'	< 3.	µg/L

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Method 8270

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/19/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
4,4-DDT'	< 2.	µg/L
Dibenzo (a,h) anthracene	< 3.	µg/L
Dibenzofuran	< 2.	µg/L
Di-n-butyl phthalate	< 2.	µg/L
1,2-Dichlorobenzene	< 2.	µg/L
1,3-Dichlorobenzene	< 2.	µg/L
1,4-Dichlorobenzene	< 2.	µg/L
3,3-Dichlorobenzidine	<10.	µg/L
Dieldrin	< 3.	µg/L
Diethyl phthalate	< 2.	µg/L
Dimethyl phthalate	< 2.	µg/L
2,4-Dinitrotoluene	< 2.	µg/L
2,6-Dinitrotoluene	< 2.	µg/L
Di-n-octylphthalate	< 2.	µg/L
1,2-Diphenylhydrazine	< 2.	µg/L
Endosulfan I	<10.	µg/L
Endosulfan II	<10.	µg/L
Endosulfan sulfate	< 3.	µg/L
Endrin	< 2.	µg/L
Endrin aldehyde	<10.	µg/L
Fluoranthene	< 2.	µg/L
Fluorene	< 2.	µg/L
Heptachlor	< 2.	µg/L
Heptachlor epoxide	< 2.	µg/L
Hexachlorobenzene	< 2.	µg/L
Hexachlorobutadiene	< 2.	µg/L
Hexachlorocyclopentadiene	< 2.	µg/L
Hexachloroethane	< 2.	µg/L
Indeno (1,2,3-cd) pyrene	< 2.	µg/L

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Method 8270

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/19/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
Isophorone	< 2.	µg/L
2-Methylnaphthalene	< 2.	µg/L
Naphthalene	< 2.	µg/L
2-Naphthylamine	<20.	µg/L
2-Nitroaniline	< 2.	µg/L
3-Nitroaniline	< 2.	µg/L
4-Nitroaniline	< 5.	µg/L
Nitrobenzene	< 2.	µg/L
n-Nitrosodimethylamine	< 2.	µg/L
n-Nitrosodiphenylamine	< 2.	µg/L
N-Nitrosodi-n-propylamine	< 2.	µg/L
Phenanthrene	< 2.	µg/L
Pyrene	< 2.	µg/L
1,2,4-Trichlorobenzene	< 2.	µg/L
4-Chloro-3-methylphenol	< 5.	µg/L
2-Chlorophenol	< 2.	µg/L
2,4-Dichlorophenol	< 2.	µg/L
2,4-Dimethylphenol	< 2.	µg/L
2,4-Dinitrophenol	<10.	µg/L
2-Methyl-4,6-dinitrophenol	<10.	µg/L
2-Methylphenol	< 2.	µg/L
3- & 4-Methylphenol	< 2.	µg/L
2-Nitrophenol	< 2.	µg/L
4-Nitrophenol	< 2.	µg/L
Pentachlorophenol	<10.	µg/L
Phenol	< 2.	µg/L
2,4,5-Trichlorophenol	< 5.	µg/L
2,4,6-Trichlorophenol	< 5.	µg/L
Acetophenone	<10.	µg/L

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/19/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
2-Acetylaminofluorene	<10.	µg/L
4-Aminobiphenyl	<20.	µg/L
2,6-Dichlorophenol	<10.	µg/L
p-(Dimethylamine) azobenzene	<10.	µg/L
7,12-Dimethylbenz (a) anthracene	<10.	µg/L
3,3'-Dimethylbenzidine	<20.	µg/L
Diphenylamine	<10.	µg/L
Ethyl methanesulfonate	<10.	µg/L
Kepone	<20.	µg/L
Methapyrilene	<10.	µg/L
3-Methylcholanthrene	<10.	µg/L
Methyl methanesulfonate	<10.	µg/L
1,4-Napthoquinone	<20.	µg/L
1-Napthylamine	<20.	µg/L
5-Nitro-o-toluidine	<10.	µg/L
n-Nitrosodibutylamine	<10.	µg/L
n-Nitrosomethylethylamine	<10.	µg/L
n-Nitrosopiperidine	<10.	µg/L
n-Nitrosopyrrolidine	<10.	µg/L
Pentachlorobenzene	<10.	µg/L
Pentachloronitrobenzene	<10.	µg/L
Phenacetin	<10.	µg/L
1,4-Phenylenediamine	<20.	µg/L
Pronamide	<10.	µg/L
1,2,4,5-Tetrachlorobenzene	<10.	µg/L
2,3,4,6-Tetrachlorophenol	<10.	µg/L
o-Toluidine	<10.	µg/L

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Method 8270

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 04/19/2001
Sample Matrix: Groundwater
QC Batch ID: 200103004-1*8270

Samples Affected: 01-03004-1 - 01-03004-9

Constituents	Method Blank Readings	Units
0,0,0-Triethyl phosphorothioate	<10.	µg/L
1,3,5-Trinitrobenzene	<10.	µg/L

Quality Control Officer

Danette Bohm

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BAS 01-07110

BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

PROJECT INFORMATION

PROJECT NAME: GREGORY CANYON
JOB NUMBER: —
PROJECT MANAGER: SARAH BATTELLE
LABORATORY: BC LABS
SHIPMENT METHOD: LAB COURIER
TURNAROUND TIME:

DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	Chloride, Sulfate, Nitrate (N), pH, TDS	Metals (Ca, Mg, Na)	CAM Metals (Except Molybdenum) + Tin	8260 (Volatile Organics including isobutyl alcohol	8270 (SVOCs including organophosphorus pesticides	Cyanide, sulfide	8150 (Chlorinated Herbicides)	8080 (Organochlorine Pesticides & PCBs)
GLA-12	-1	6-20-01	1440	GW	9	X	X	X	X	X	X	X	X
GLA-13	-2	↓	1110	↓	9	X	X	X	X	X	X	X	X
GLA-11	-3	↓	1240	↓	9	X	X	X	X	X	X	X	X
GLA-16	-4	↓	1005	↓	9	X	X	X	X	X	X	X	X
LUCIO #2	-5	↓	1245	↓	9	X	X	X	X	X	X	X	X
EQUIP BLANK	-6	↓	—	W	1				X				
FIELD BLANK	-7	↓	—	↓	1				X				
TRIP BLANK	-8TB	↓	—	↓	1				X				

* No Bottle received (8TB) don't run pc 6/21/01

REC'D JUL 18 2001

CHK BY: APR
DISTRIBUTION: MABGSB
SUB-OUT ☐

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO BOD MBAS C O T

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	6-20-01 1700	[signature]
[signature]	6/21/01 1245	[signature]
[signature]	6-21-01 15150	[signature] 6-21-01 1550

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed _____
Sample(s):
Integrity _____
Chilled _____
Sealed _____

COMMENTS:
EQUIP. & FIELD Blanks collected w/ BAS DI water.
No container provi FOR CYANIDE paran ter.

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originatc

BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

RECD JUL 1 8 2001

RECD JUL 1 8 2001

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-12
Sampling Date/Time: 06/20/2001 @ 14:40

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	49.	mg/L	0.05	0.02	EPA-6010
Magnesium	30.	mg/L	0.05	0.02	EPA-6010
Sodium	88.	mg/L	0.5	0.07	EPA-6010
Sulfate	38.	mg/L	1.	0.25	EPA-300.0
Chloride	119.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	0.28	mg/L	0.1	0.020	EPA-300.0
pH	7.16	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	520.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-13
Sampling Date/Time: 06/20/2001 @ 11:10

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	100.	mg/L	0.05	0.02	EPA-6010
Magnesium	65.	mg/L	0.05	0.02	EPA-6010
Sodium	130.	mg/L	0.5	0.07	EPA-6010
Sulfate	137.	mg/L	1.	0.25	EPA-300.0
Chloride	269.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	29.3	mg/L	0.2	0.040	EPA-300.0
pH	7.19	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	990.	mg/L	50.	30.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-11
Sampling Date/Time: 06/20/2001 @ 12:40

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	98.	mg/L	0.05	0.02	EPA-6010
Magnesium	32.	mg/L	0.05	0.02	EPA-6010
Sodium	110.	mg/L	0.5	0.07	EPA-6010
Sulfate	85.	mg/L	1.	0.25	EPA-300.0
Chloride	184.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	0.32	mg/L	0.1	0.020	EPA-300.0
pH	7.60	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	750.	mg/L	50.	30.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-16
Sampling Date/Time: 06/20/2001 @ 10:05

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	85.	mg/L	0.05	0.02	EPA-6010
Magnesium	41.	mg/L	0.05	0.02	EPA-6010
Sodium	81.	mg/L	0.5	0.07	EPA-6010
Sulfate	108.	mg/L	1.	0.25	EPA-300.0
Chloride	109.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	6.60	mg/L	0.1	0.020	EPA-300.0
pH	7.49	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	683.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: LUCIO#2
Sampling Date/Time: 06/20/2001 @ 12:45

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	94.	mg/L	0.05	0.02	EPA-6[illegible]
Magnesium	34.	mg/L	0.05	0.02	EPA-6[illegible]
Sodium	67.	mg/L	0.5	0.07	EPA-6[illegible]
Sulfate	159.	mg/L	1.	0.25	EPA-3[illegible]
Chloride	103.	mg/L	0.5	0.090	EPA-3[illegible]
Nitrate as N	0.57	mg/L	0.1	0.020	EPA-3[illegible]
pH	7.35	pH Units	-.	-.	EPA-9[illegible]
Total Dissolved Solids @ 180 C	667.	mg/L	40.	20.	EPA-1[illegible]
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9[illegible]
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-3[illegible]

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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M. Atencio

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-12
Sampling Date/Time: 06/20/2001 @ 14:40

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		20.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		10.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-13
Sampling Date/Time: 06/20/2001 @ 11:10

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony	*02	10.	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		79.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel	*02	3.0	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		47.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-11
Sampling Date/Time: 06/20/2001 @ 12:40

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		4.	µg/L	2.	0.7	EPA-7060
Dissolved Barium	*02	6.0	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		20.	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium	*02	6.0	µg/L	10.	3.	EPA-6010
Dissolved Zinc		13.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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WATER ANALYSIS
(METALS)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-16
Sampling Date/Time: 06/20/2001 @ 10:05

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		81.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc	*02	1.2	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Laboratory Director

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WATER ANALYSIS
(METALS)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: LUCIO#2
Sampling Date/Time: 06/20/2001 @ 12:45

Constituents		Results	Units	P.Q.L.	M.D.L.	Meth
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7
Dissolved Barium		110.	µg/L	10.	0.9	EPA-6
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6
Dissolved Chromium	*02	4.0	µg/L	10.	4.	EPA-6
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6
Dissolved Copper	*02	6.	µg/L	10.	3.	EPA-6
Dissolved Lead	*	0.7	µg/L	1.	0.40	EPA-7
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7
Dissolved Silver	*02	5.	µg/L	10.	3.	EPA-6
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7
Dissolved Vanadium		10.	µg/L	10.	3.	EPA-6
Dissolved Zinc	*02	9.0	µg/L	10.	0.89	EPA-6

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
- * = Sample result is between the MDL and PQL.
  Continuing calibration blank result is between the MDL and PQL.
- *01 = Note: PQL's and MDL's are raised due to matrix interferences.
- *02 = Sample result is between the MDL and PQL.

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Laboratory Director

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/03/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 14:40
Date Extracted: 06/22/2001
Date Analyzed: 06/26/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	81.	%	51-118	
Dibutyl chlorendate	98.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/03/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 11:10
Date Extracted: 06/22/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	76.	%	51-118	
Dibutyl chlorendate	92.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/03/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:40
Date Extracted: 06/22/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	72.	%	51-118	
Dibutyl chlorendate	81.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/03/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 10:05
Date Extracted: 06/22/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	79.	%	51-118	
Dibutyl chlorendate	104.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/03/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: LUCIO#2
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:45
Date Extracted: 06/22/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	89.	%	51-118	
Dibutyl chlorendate	101.	%	62-142	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 06/28/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 14:40
Date Extracted: 06/22/2001
Date Analyzed: 06/26/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	83.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 06/28/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 11:10
Date Extracted: 06/22/2001
Date Analyzed: 06/26/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	97.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 06/28/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:40
Date Extracted: 06/22/2001
Date Analyzed: 06/26/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	96.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 06/28/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 10:05
Date Extracted: 06/22/2001
Date Analyzed: 06/26/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	78.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 06/28/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: LUCIO#2
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:45
Date Extracted: 06/22/2001
Date Analyzed: 06/26/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	92.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 14:40
Date Extracted: 06/22/2001
Date Analyzed: 07/02/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.23	*13
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.8	
Anthracene	None Detected	µg/L	2.	0.22	
Benzidine	None Detected	µg/L	20.	0.16	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.66	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.21	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	0.79	µg/L	5.	0.33	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.75	
4,4-DDT'	None Detected	µg/L	2.	0.22	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.29	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	*13
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-12, 06/20/2001 @ 14:40

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	*13
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28	
Di-n-octylphthalate	None Detected	µg/L	2.	0.20	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38	
Endosulfan I	None Detected	µg/L	10.	1.0	
Endosulfan II	None Detected	µg/L	10.	0.78	
Endosulfan sulfate	None Detected	µg/L	3.	0.33	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.54	
Fluoranthene	None Detected	µg/L	2.	0.25	
Fluorene	None Detected	µg/L	2.	0.28	
Heptachlor	None Detected	µg/L	2.	0.28	
Heptachlor epoxide	None Detected	µg/L	2.	0.25	
Hexachlorobenzene	None Detected	µg/L	2.	0.27	*13
Hexachlorobutadiene	None Detected	µg/L	2.	0.35	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23	
Isophorone	None Detected	µg/L	2.	0.27	
2-Methylnaphthalene	None Detected	µg/L	2.	0.31	
Naphthalene	None Detected	µg/L	2.	0.24	
2-Naphthylamine	None Detected	µg/L	20.	0.066	
2-Nitroaniline	None Detected	µg/L	2.	0.73	
3-Nitroaniline	None Detected	µg/L	2.	1.4	
4-Nitroaniline	None Detected	µg/L	5.	1.1	
Nitrobenzene	None Detected	µg/L	2.	0.23	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	None Detected	µg/L	2.	0.23	
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23	
2-Chlorophenol	None Detected	µg/L	2.	0.16	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4	
2-Methylphenol	None Detected	µg/L	2.	0.20	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41	
2-Nitrophenol	None Detected	µg/L	2.	0.26	
4-Nitrophenol	None Detected	µg/L	2.	0.46	
Pentachlorophenol	None Detected	µg/L	10.	0.54	
Phenol	None Detected	µg/L	2.	0.19	

ll results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.

BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-12, 06/20/2001 @ 14:40

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.12
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.87
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	77.	21-100
Phenol-d5	63.	10-94
Nitrobenzene-d5	104.	35-114
2-Fluorobiphenyl	96.	43-116
2,4,6-Tribromophenol	121.	10-123

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-12, 06/20/2001 @ 14:40

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	94.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Method blank for bis-2-ethylhexyl-phthalate detected at 0.67 µg/L.
*13 = LCS recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 11:10
Date Extracted: 06/22/2001
Date Analyzed: 07/02/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.24	*13
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.9	
Anthracene	None Detected	µg/L	2.	0.23	
Benzidine	None Detected	µg/L	20.	0.17	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.67	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.67	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.22	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	0.67	µg/L	5.	0.33	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.76	
4,4-DDT'	None Detected	µg/L	2.	0.23	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.30	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	*13
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.36	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-13, 06/20/2001 @ 11:10

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	*13
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28	
Di-n-octylphthalate	None Detected	µg/L	2.	0.20	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38	
Endosulfan I	None Detected	µg/L	10.	1.1	
Endosulfan II	None Detected	µg/L	10.	0.79	
Endosulfan sulfate	None Detected	µg/L	3.	0.33	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.55	
Fluoranthene	None Detected	µg/L	2.	0.26	
Fluorene	None Detected	µg/L	2.	0.28	
Heptachlor	None Detected	µg/L	2.	0.28	
Heptachlor epoxide	None Detected	µg/L	2.	0.25	
Hexachlorobenzene	None Detected	µg/L	2.	0.28	*13
Hexachlorobutadiene	None Detected	µg/L	2.	0.36	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23	
Isophorone	None Detected	µg/L	2.	0.27	
2-Methylnaphthalene	None Detected	µg/L	2.	0.31	
Naphthalene	None Detected	µg/L	2.	0.25	
2-Naphthylamine	None Detected	µg/L	20.	0.067	
2-Nitroaniline	None Detected	µg/L	2.	0.74	
3-Nitroaniline	None Detected	µg/L	2.	1.5	
4-Nitroaniline	None Detected	µg/L	5.	1.2	
Nitrobenzene	None Detected	µg/L	2.	0.24	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	None Detected	µg/L	2.	0.23	
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24	
2-Chlorophenol	None Detected	µg/L	2.	0.17	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.68	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4	
2-Methylphenol	None Detected	µg/L	2.	0.20	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.42	
2-Nitrophenol	None Detected	µg/L	2.	0.26	
4-Nitrophenol	None Detected	µg/L	2.	0.46	
Pentachlorophenol	None Detected	µg/L	10.	0.54	
Phenol	None Detected	µg/L	2.	0.19	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-13, 06/20/2001 @ 11:10

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.13
2-Acetylaminofluorene	None Detected	µg/L	10.	0.47
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.068
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26
Diphenylamine	None Detected	µg/L	10.	0.082
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.88
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.063
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25
o-Toluidine	None Detected	µg/L	10.	0.073
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.060

Quality Control Data

Surrogates	% Recovery	Control Limits	
2-Fluorophenol	83.	21-100	
Phenol-d5	72.	10-94	
Nitrobenzene-d5	108.	35-114	
2-Fluorobiphenyl	99.	43-116	
2,4,6-Tribromophenol	127.	10-123	*21

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-13, 06/20/2001 @ 11:10

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	101.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Method blank for bis-2-ethylhexyl-phthalate detected at 0.67 µg/L.
*13 = LCS recovery not within established limits.
*21 = Surrogate recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:40
Date Extracted: 06/22/2001
Date Analyzed: 07/02/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.24	*13
Acenaphthylene	None Detected	µg/L	2.	0.37	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.9	
Anthracene	None Detected	µg/L	2.	0.23	
Benzidine	None Detected	µg/L	20.	0.17	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.68	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.65	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.85	
Benzyl alcohol	None Detected	µg/L	2.	0.67	
Butyl Benzyl phthalate	0.40	µg/L	2.	0.25	*
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.24	
delta-BHC	None Detected	µg/L	2.	0.27	
gamma-BHC	None Detected	µg/L	2.	0.22	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.57	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.23	
bis(2-ethylhexyl)phthalate	4.2	µg/L	5.	0.34	**
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.30	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.32	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.77	
4,4-DDT'	None Detected	µg/L	2.	0.23	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.30	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.25	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	*13
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.36	
Dieldrin	None Detected	µg/L	3.	0.44	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-11, 06/20/2001 @ 12:40

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	*13
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.29	
Di-n-octylphthalate	None Detected	µg/L	2.	0.21	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.39	
Endosulfan I	None Detected	µg/L	10.	1.1	
Endosulfan II	None Detected	µg/L	10.	0.80	
Endosulfan sulfate	None Detected	µg/L	3.	0.33	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.55	
Fluoranthene	None Detected	µg/L	2.	0.26	
Fluorene	None Detected	µg/L	2.	0.29	
Heptachlor	None Detected	µg/L	2.	0.28	
Heptachlor epoxide	None Detected	µg/L	2.	0.25	
Hexachlorobenzene	None Detected	µg/L	2.	0.28	*13
Hexachlorobutadiene	None Detected	µg/L	2.	0.36	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23	
Isophorone	None Detected	µg/L	2.	0.27	
2-Methylnaphthalene	None Detected	µg/L	2.	0.31	
Naphthalene	None Detected	µg/L	2.	0.25	
2-Naphthylamine	None Detected	µg/L	20.	0.068	
2-Nitroaniline	None Detected	µg/L	2.	0.75	
3-Nitroaniline	None Detected	µg/L	2.	1.5	
4-Nitroaniline	None Detected	µg/L	5.	1.2	
Nitrobenzene	None Detected	µg/L	2.	0.24	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.21	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	None Detected	µg/L	2.	0.23	
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.37	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24	
2-Chlorophenol	None Detected	µg/L	2.	0.17	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.69	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.5	
2-Methylphenol	None Detected	µg/L	2.	0.21	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.42	
2-Nitrophenol	None Detected	µg/L	2.	0.26	
4-Nitrophenol	None Detected	µg/L	2.	0.47	
Pentachlorophenol	None Detected	µg/L	10.	0.55	
Phenol	None Detected	µg/L	2.	0.19	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-11, 06/20/2001 @ 12:40

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.25
Acetophenone	None Detected	µg/L	10.	0.13
2-Acetylaminofluorene	None Detected	µg/L	10.	0.47
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.069
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26
Diphenylamine	None Detected	µg/L	10.	0.083
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18
Kepone	None Detected	µg/L	20.	2.6
Methapyrilene	None Detected	µg/L	10.	0.89
3-Methylcholanthrene	None Detected	µg/L	10.	0.16
Methyl methanesulfonate	None Detected	µg/L	10.	0.14
1,4-Napthoquinone	None Detected	µg/L	20.	0.49
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.064
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.20
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.17
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.18
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.50
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25
o-Toluidine	None Detected	µg/L	10.	0.074
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.19
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.061

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	72.	21-100
Phenol-d5	64.	10-94
Nitrobenzene-d5	101.	35-114
2-Fluorobiphenyl	95.	43-116
2,4,6-Tribromophenol	121.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-11, 06/20/2001 @ 12:40

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	101.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Method blank for Benzyl-butyl-phthalate detected at 0.26 µg/L.
** = Sample result is between the MDL and PQL.
Method blank for bis-2-ethylhexyl-phthalate detected at 0.67 µg/L.
*13 = LCS recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 10:05
Date Extracted: 06/22/2001
Date Analyzed: 07/02/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.23	*13
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.8	
Anthracene	None Detected	µg/L	2.	0.22	
Benzidine	None Detected	µg/L	20.	0.16	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.66	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.21	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	0.81	µg/L	5.	0.33	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.75	
4,4-DDT'	None Detected	µg/L	2.	0.22	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.29	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	*13
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-16, 06/20/2001 @ 10:05

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	*13
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28	
Di-n-octylphthalate	None Detected	µg/L	2.	0.20	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38	
Endosulfan I	None Detected	µg/L	10.	1.0	
Endosulfan II	None Detected	µg/L	10.	0.78	
Endosulfan sulfate	None Detected	µg/L	3.	0.33	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.54	
Fluoranthene	None Detected	µg/L	2.	0.25	
Fluorene	None Detected	µg/L	2.	0.28	
Heptachlor	None Detected	µg/L	2.	0.28	
Heptachlor epoxide	None Detected	µg/L	2.	0.25	
Hexachlorobenzene	None Detected	µg/L	2.	0.27	*13
Hexachlorobutadiene	None Detected	µg/L	2.	0.35	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23	
Isophorone	None Detected	µg/L	2.	0.27	
2-Methylnaphthalene	None Detected	µg/L	2.	0.31	
Naphthalene	None Detected	µg/L	2.	0.24	
2-Naphthylamine	None Detected	µg/L	20.	0.066	
2-Nitroaniline	None Detected	µg/L	2.	0.73	
3-Nitroaniline	None Detected	µg/L	2.	1.4	
4-Nitroaniline	None Detected	µg/L	5.	1.1	
Nitrobenzene	None Detected	µg/L	2.	0.23	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	None Detected	µg/L	2.	0.23	
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23	
2-Chlorophenol	None Detected	µg/L	2.	0.16	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4	
2-Methylphenol	None Detected	µg/L	2.	0.20	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41	
2-Nitrophenol	None Detected	µg/L	2.	0.26	
4-Nitrophenol	None Detected	µg/L	2.	0.46	
Pentachlorophenol	None Detected	µg/L	10.	0.54	
Phenol	None Detected	µg/L	2.	0.19	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-16, 06/20/2001 @ 10:05

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.12
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.87
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	81.	21-100
Phenol-d5	69.	10-94
Nitrobenzene-d5	110.	35-114
2-Fluorobiphenyl	99.	43-116
2,4,6-Tribromophenol	123.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-16, 06/20/2001 @ 10:05

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	103.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Method blank for bis-2-ethylhexyl-phthalate detected at 0.67 µg/L.
*13 = LCS recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: LUCIO#2
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:45
Date Extracted: 06/22/2001
Date Analyzed: 07/02/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.24	*~~13~~
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.9	
Anthracene	None Detected	µg/L	2.	0.23	
Benzidine	None Detected	µg/L	20.	0.17	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.67	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.67	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.22	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	0.62	µg/L	5.	0.33	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.76	
4,4-DDT'	None Detected	µg/L	2.	0.23	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.30	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	*~~13~~
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.36	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Sample Description: GREGORY CANYON, GREGORY CANYON, LUCIO#2, 06/20/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	*13
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28	
Di-n-octylphthalate	None Detected	µg/L	2.	0.20	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38	
Endosulfan I	None Detected	µg/L	10.	1.1	
Endosulfan II	None Detected	µg/L	10.	0.79	
Endosulfan sulfate	None Detected	µg/L	3.	0.33	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.55	
Fluoranthene	None Detected	µg/L	2.	0.26	
Fluorene	None Detected	µg/L	2.	0.28	
Heptachlor	None Detected	µg/L	2.	0.28	
Heptachlor epoxide	None Detected	µg/L	2.	0.25	
Hexachlorobenzene	None Detected	µg/L	2.	0.28	*13
Hexachlorobutadiene	None Detected	µg/L	2.	0.36	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23	
Isophorone	None Detected	µg/L	2.	0.27	
2-Methylnaphthalene	None Detected	µg/L	2.	0.31	
Naphthalene	None Detected	µg/L	2.	0.25	
2-Naphthylamine	None Detected	µg/L	20.	0.067	
2-Nitroaniline	None Detected	µg/L	2.	0.74	
3-Nitroaniline	None Detected	µg/L	2.	1.5	
4-Nitroaniline	None Detected	µg/L	5.	1.2	
Nitrobenzene	None Detected	µg/L	2.	0.24	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	None Detected	µg/L	2.	0.23	
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24	
2-Chlorophenol	None Detected	µg/L	2.	0.17	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.68	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4	
2-Methylphenol	None Detected	µg/L	2.	0.20	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.42	
2-Nitrophenol	None Detected	µg/L	2.	0.26	
4-Nitrophenol	None Detected	µg/L	2.	0.46	
Pentachlorophenol	None Detected	µg/L	10.	0.54	
Phenol	None Detected	µg/L	2.	0.19	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Sample Description: GREGORY CANYON, GREGORY CANYON, LUCIO#2, 06/20/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.13
2-Acetylaminofluorene	None Detected	µg/L	10.	0.47
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.068
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26
Diphenylamine	None Detected	µg/L	10.	0.082
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.88
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.063
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25
o-Toluidine	None Detected	µg/L	10.	0.073
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.060

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	78.	21-100
Phenol-d5	65.	10-94
Nitrobenzene-d5	105.	35-114
2-Fluorobiphenyl	97.	43-116
2,4,6-Tribromophenol	116.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Sample Description: GREGORY CANYON, GREGORY CANYON, LUCIO#2, 06/20/2001 @ 12:45

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	93.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Method blank for bis-2-ethylhexyl-phthalate detected at 0.67 µg/L.
*13 = LCS recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*WATER

Samples Affected: 01-07110-1, 01-07110-3 - 01-07110-5

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	06/20/2001	ARD	EPA-6010	06/25/2001	ARD
Magnesium	EPA-600-4-79-02	06/20/2001	ARD	EPA-6010	06/25/2001	ARD
Sodium	EPA-600-4-79-02	06/20/2001	ARD	EPA-6010	06/25/2001	ARD
Sulfate	n.a.	06/22/2001	DPC	EPA-300.0	06/22/2001	DPC
Chloride	n.a.	06/22/2001	DPC	EPA-300.0	06/22/2001	DPC
Nitrate as N	n.a.	06/22/2001	DPC	EPA-300.0	06/22/2001	DPC
pH	n.a.	06/22/2001	PDL	EPA-9040	06/22/2001	PDL
Total Dissolved Solids @ 180 C	n.a.	06/25/2001	ELN	EPA-160.1	06/25/2001	ELN
Total Cyanide	EPA-335.3	06/26/2001	MET	EPA-9012	06/27/2001	TDC
Total Sulfide	n.a.	06/22/2001	JWH2	EPA-376.2	06/22/2001	JWH2

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*WATER

Samples Affected: 01-07110-1, 01-07110-3 - 01-07110-5

Constituents	Method Blank Readings	Units
Calcium	< 0.05	mg/L
Magnesium	< 0.05	mg/L
Sodium	< 0.5	mg/L
Sulfate	< 1.	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*WATER

Samples Affected: 01-07110-1, 01-07110-3 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	DISS-7110-1	48.85	47.94	57.87	56.83	10.2	10.2	mg/L	2.	2.	20	H MEAN	H MEAN	85 - 11
Magnesium	DISS-7110-1	30.39	29.87	40.26	39.5	10.2	10.2	mg/L	2.	2.	20	97.	89.	85 - 11
Sodium	DISS-7110-1	88.07	86.21	95.91	94.18	10.2	10.2	mg/L	2.	2.	20	H MEAN	H MEAN	85 - 11
Sulfate	6966-2	15.18	15.02	115.3	115.4	100.0	100.0	mg/L	1.	0.	10	100.	100.	80 - 12
Chloride	6966-2	2.832	2.848	104.7	105.4	100.0	100.0	mg/L	1.	1.	10	102.	103.	80 - 12
Nitrate as N	6966-2	0.2645	0.2739	5.206	5.151	5.000	5.000	mg/L	<PQL	1.	10	99.	98.	80 - 12
pH	7084-1	7.58	7.59					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	7110-1	520.0	523.3					mg/L	1.		10			
Total Cyanide	W-TOTAL-07179-	< 0.02	< 0.02	0.2006	0.1977	0.2500	0.2500	mg/L	<PQL	1.	10	80.	79.	90 - 11
Total Sulfide	7110-1	< 0.1	< 0.1	0.5687	0.5722	0.5556	0.5556	mg/L	<PQL	1.	10	99.	100.	80 - 12

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike leve
The matrix spike recoveries for Total Cyanide are outside QC limits.

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*WATER

Samples Affected: 01-07110-1, 01-07110-3 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Calcium	LFB-1	9.9820	10.	mg/L	100.	85 - 115
Magnesium	LFB-1	10.22	10.	mg/L	102.	85 - 115
Sodium	LFB-1	10.47	10.	mg/L	105.	85 - 115
Sulfate	LCSW-6-21A	94.925	100.	mg/L	95.	90 - 110
Chloride	LCSW-6-21A	99.431	100.	mg/L	99.	90 - 110
Nitrate as N	LCSW-6-21A	4.8321	5.00	mg/L	97.	90 - 110
pH	LCSW1	6.99	7.0	pH Units	100.	98 - 102
Total Dissolved Solids @ 180 C	LCSW1	600.00	586.	mg/L	102.	90 - 110
Total Cyanide	W-TOTAL-LC	9.8773	10.0	mg/L	99.	90 - 110
Total Sulfide	LCSW1	0.50867	0.500	mg/L	102.	90 - 110

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-2*WATER

Samples Affected: 01-07110-2

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	06/20/2001	ARD	EPA-6010	06/25/2001	ARD
Magnesium	EPA-600-4-79-02	06/20/2001	ARD	EPA-6010	06/25/2001	ARD
Sodium	EPA-600-4-79-02	06/20/2001	ARD	EPA-6010	06/25/2001	ARD
Sulfate	n.a.	06/22/2001	DPC	EPA-300.0	06/22/2001	DPC
Chloride	n.a.	06/22/2001	DPC	EPA-300.0	06/22/2001	DPC
Nitrate as N	n.a.	06/22/2001	MMT	EPA-300.0	06/22/2001	MMT
pH	n.a.	06/22/2001	PDL	EPA-9040	06/22/2001	PDL
Total Dissolved Solids @ 180 C	n.a.	06/25/2001	ELN	EPA-160.1	06/25/2001	ELN
Total Cyanide	EPA-335.3	06/26/2001	MET	EPA-9012	06/27/2001	TDC
Total Sulfide	n.a.	06/22/2001	JWH2	EPA-376.2	06/22/2001	JWH2

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-2*WATER

Samples Affected: 01-07110-2

Constituents	Method Blank Readings	Units
Calcium	< 0.05	mg/L
Magnesium	< 0.05	mg/L
Sodium	< 0.5	mg/L
Sulfate	< 1.	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-2*WATER

Samples Affected: 01-07110-2

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	DISS-7110-1	48.85	47.94	57.87	56.83	10.2	10.2	mg/L	2.	2.	20	H MEAN	H MEAN	85 - 11
Magnesium	DISS-7110-1	30.39	29.87	40.26	39.5	10.2	10.2	mg/L	2.	2.	20	97.	89.	85 - 11
Sodium	DISS-7110-1	88.07	86.21	95.91	94.18	10.2	10.2	mg/L	2.	2.	20	H MEAN	H MEAN	85 - 11
Sulfate	6966-2	15.18	15.02	115.3	115.4	100.0	100.0	mg/L	1.	0.	10	100.	100.	80 - 12
Chloride	6966-2	2.832	2.848	104.7	105.4	100.0	100.0	mg/L	1.	1.	10	102.	103.	80 - 12
Nitrate as N	7099-1	6.674	6.543	11.76	11.77	5.000	5.000	mg/L	2.	0.	10	102.	102.	80 - 12
pH	7084-1	7.58	7.59					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	7110-1	520.0	523.3					mg/L	1.		10			
Total Cyanide	W-TOTAL-07179-	< 0.02	< 0.02	0.2006	0.1977	0.2500	0.2500	mg/L	<PQL	1.	10	80.	79.	90 - 11
Total Sulfide	7110-1	< 0.1	< 0.1	0.5687	0.5722	0.5556	0.5556	mg/L	<PQL	1.	10	99.	100.	80 - 12

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.
The matrix spike recoveries for Total Cyanide are outside QC limits.

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-2*WATER

Samples Affected: 01-07110-2

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Calcium	LFB-1	9.9820	10.	mg/L	100.	85 - 115
Magnesium	LFB-1	10.22	10.	mg/L	102.	85 - 115
Sodium	LFB-1	10.47	10.	mg/L	105.	85 - 115
Sulfate	LCSW-6-21A	94.925	100.	mg/L	95.	90 - 110
Chloride	LCSW-6-21A	99.431	100.	mg/L	99.	90 - 110
Nitrate as N	LCSW-06-22	4.9604	5.00	mg/L	99.	90 - 110
pH	LCSW1	6.99	7.0	pH Units	100.	98 - 102
Total Dissolved Solids @ 180 C	LCSW1	600.00	586.	mg/L	102.	90 - 110
Total Cyanide	W-TOTAL-LC	9.8773	10.0	mg/L	99.	90 - 110
Total Sulfide	LCSW1	0.50867	0.500	mg/L	102.	90 - 110

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*METAL

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	06/20/2001	FIELD	EPA-7060	07/06/2001	DIW
Dissolved Barium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Copper	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/26/2001	JCC
Dissolved Lead	EPA-600-4-79-02	06/20/2001	FIELD	EPA-7421	07/06/2001	DIW
Dissolved Mercury	EPA-7470	06/25/2001	DMM2	EPA-7470	06/28/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-7740	07/06/2001	DIW
Dissolved Silver	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Tin	EPA-600-4-79-02	06/20/2001	FIELD	EPA-282.2	06/27/2001	LMK
Dissolved Thallium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-7841	06/25/2001	LMK
Dissolved Vanadium	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	06/20/2001	FIELD	EPA-6010	06/25/2001	ARD

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*METAL

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<10.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 1.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 1.	µg/L
Dissolved Silver	<10.	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	<10.	µg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*METAL

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	DISS-7110-1	<100.	<100.	414.7	448.4	408.2	408.2	µg/L	<PQL	8.	20	101.	109.	85 - 11
Dissolved Arsenic	DISS-7110-1	< 2.	< 2.	27.57	27.32	26.32	26.32	µg/L	<PQL	1.	20	105.	104.	85 - 11
Dissolved Barium	DISS-7110-1	19.40	19.80	219.0	213.6	204.1	204.1	µg/L	<PQL	3.	20	98.	95.	85 - 11
Dissolved Beryllium	DISS-7110-1	< 10.	< 10.	194.7	190.1	204.1	204.1	µg/L	<PQL	2.	20	96.	93.	85 - 11
Dissolved Cadmium	DISS-7110-1	< 10.	< 10.	201.3	200.1	204.1	204.1	µg/L	<PQL	1.	20	99.	98.	85 - 11
Dissolved Chromium	DISS-7110-1	< 10.	< 10.	205.7	197.1	204.1	204.1	µg/L	<PQL	4.	20	100.	96.	85 - 11
Dissolved Cobalt	DISS-7110-1	< 50.	< 50.	202.0	196.0	204.1	204.1	µg/L	<PQL	3.	20	93.	91.	85 - 11
Dissolved Copper	DISS-5178-7-X5	< 50.	< 50.	963.8	939.8	1020.	1020.	µg/L	<PQL	3.	20	100.	99.	85 - 11
Dissolved Lead	DISS-7110-1	< 1.	< 1.	25.91	25.68	26.32	26.32	µg/L	<PQL	1.	20	103.	100.	70 - 1
Dissolved Mercury	DISS-07110-1	< 0.2	< 0.2	1.070	1.045	1.000	1.000	µg/L	<PQL	2.	20	98.	96.	85 - 1
Dissolved Nickel	DISS-7110-1	< 10.	< 10.	402.4	392.8	408.2	408.2	µg/L	<PQL	2.	20	90.	91.	85 - 1
Dissolved Selenium	DISS-7110-1-X4	< 10.	< 10.	95.78	97.10	105.3	105.3	µg/L	<PQL	1.	20	98.	95.	85 - 1
Dissolved Silver	DISS-7110-1	< 10.	< 10.	200.7	193.8	204.1	204.1	µg/L	<PQL	4.	20	97.	97.	85 - 1
Dissolved Tin	DISS-7110-1	< 5.	< 5.	51.05	50.74	52.63	52.63	µg/L	<PQL	1.	20	91.	89.	85 - 1
Dissolved Thallium	DISS-7110-2	< 1.	< 1.	24.40	23.72	26.32	26.32	µg/L	<PQL	3.	20	103.	100.	85 - 1
Dissolved Vanadium	DISS-7110-1	30.10	30.20	240.0	233.7	204.1	204.1	µg/L	<PQL	3.	20	102.	100.	85 - 1
Dissolved Zinc	DISS-7110-1	10.30	5.000	218.0	214.0	204.1	204.1	µg/L	<PQL	2.	20			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*METAL

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Dissolved Antimony	LFB-1	388.80	400.	µg/L	97.	85 - 115
Dissolved Arsenic	LFB-LCSW	26.384	25.0	µg/L	106.	85 - 115
Dissolved Barium	LFB-1	197.40	200.	µg/L	99.	85 - 115
Dissolved Beryllium	LFB-1	188.50	200.	µg/L	94.	85 - 115
Dissolved Cadmium	LFB-1	201.70	200.	µg/L	101.	85 - 115
Dissolved Chromium	LFB-1	202.20	200.	µg/L	101.	85 - 115
Dissolved Cobalt	LFB-1	201.40	200.	µg/L	101.	85 - 115
Dissolved Copper	LFB-1	190.00	200.	µg/L	95.	85 - 115
Dissolved Lead	LFB-LCSW	25.408	25.0	µg/L	102.	85 - 115
Dissolved Mercury	DISS-LCSW2	1.0157	1.00	µg/L	102.	85 - 115
Dissolved Nickel	LFB-1	405.70	400.	µg/L	101.	85 - 115
Dissolved Selenium	LFB-LCSW	24.045	25.0	µg/L	96.	85 - 115
Dissolved Silver	LFB-1	193.50	200.	µg/L	97.	85 - 115
Dissolved Tin	LFB-50-LCS	47.400	50.0	µg/L	95.	85 - 115
Dissolved Thallium	LFB-25-LCS	23.980	25.0	µg/L	96.	85 - 115
Dissolved Vanadium	LFB-1	202.80	200.	µg/L	101.	85 - 115
Dissolved Zinc	LFB-1	209.70	200.	µg/L	105.	85 - 115

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 06/29/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8150

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8150 compounds	EPA-3510	06/22/2001	MM	EPA-8150	06/26/2001	KMS

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 06/28/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8150

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
2,4-D	LCS	1.865	2.000	µg/L	93.	20 - 142
Dinoseb	LCS	0.740	1.000	µg/L	74.	13 - 119
2,4,5-T	LCS	0.569	0.600	µg/L	95.	42 - 121
2,4,5-TP (Silvex)	LCS	0.606	0.600	µg/L	101.	54 - 132

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 06/28/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8150

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
2,4-D	< 0.4	µg/L
Dinoseb	< 0.2	µg/L
2,4,5-T	< 0.09	µg/L
2,4,5-TP (Silvex)	< 0.07	µg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 06/28/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8150

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
2,4-D	MS-06-22-01	< 0.4	2.024	2.097	2.000	2.000	µg/L	4.	30	101.	105.	20 - 142
Dinoseb	MS-06-22-01	< 0.2	0.879	0.804	1.000	1.000	µg/L	9.	30	88.	80.	13 - 119
2,4,5-T	MS-06-22-01	< 0.09	0.617	0.588	0.600	0.600	µg/L	5.	30	103.	98.	42 - 121
2,4,5-TP (Silvex)	MS-06-22-01	< 0.07	0.659	0.687	0.600	0.600	µg/L	4.	30	110.	115.	54 - 132

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/10/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8080

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Aldrin	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
alpha-BHC	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
beta-BHC	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
delta-BHC	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
gamma-BHC	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Chlordane (Technical)	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
4,4'-DDD	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
4,4'-DDE	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
4,4'-DDT	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Dieldrin	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Endosulfan I	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Endosulfan II	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Endosulfan Sulfate	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Endrin	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Endrin Aldehyde	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Heptachlor	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Heptachlor Epoxide	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Hexachlorocyclopentadiene	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Methoxychlor	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Toxaphene	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1016	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1221	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1232	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1242	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1248	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1254	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
PCB-1260	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB
Total PCB's (Summation)	EPA-3510	06/22/2001	MM/JCM	EPA-8080	06/26/2001	RKB

BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/03/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8080

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
Aldrin	< 0.005	µg/L
alpha-BHC	< 0.005	µg/L
beta-BHC	< 0.005	µg/L
delta-BHC	< 0.005	µg/L
gamma-BHC	< 0.005	µg/L
Chlordane (Technical)	< 0.1	µg/L
4,4'-DDD	< 0.005	µg/L
4,4'-DDE	< 0.005	µg/L
4,4'-DDT	< 0.005	µg/L
Dieldrin	< 0.005	µg/L
Endosulfan I	< 0.005	µg/L
Endosulfan II	< 0.005	µg/L
Endosulfan Sulfate	< 0.005	µg/L
Endrin	< 0.005	µg/L
Endrin Aldehyde	< 0.01	µg/L
Heptachlor	< 0.005	µg/L
Heptachlor Epoxide	< 0.005	µg/L
Hexachlorocyclopentadiene	< 0.01	µg/L
Methoxychlor	< 0.005	µg/L
Toxaphene	< 2.	µg/L
PCB-1016	< 0.2	µg/L
PCB-1221	< 0.2	µg/L
PCB-1232	< 0.2	µg/L
PCB-1242	< 0.2	µg/L
PCB-1248	< 0.2	µg/L
PCB-1254	< 0.2	µg/L
PCB-1260	< 0.2	µg/L
Total PCB's (Summation)	< 0.2	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/03/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8080

Samples Affected: 01-07110-1 - 01-07110-5

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/03/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8080

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Aldrin	MS-06-22-01	< 0.005	0.261	0.266	0.250	0.250	µg/L	2.	24	104.	107.	49 - 126
gamma-BHC	MS-06-22-01	< 0.005	0.255	0.267	0.250	0.250	µg/L	4.	23	102.	107.	52 - 128
4,4'-DDT	MS-06-22-01	< 0.005	0.275	0.298	0.250	0.250	µg/L	8.	28	110.	119.	34 - 146
Dieldrin	MS-06-22-01	< 0.005	0.274	0.278	0.250	0.250	µg/L	1.	26	110.	111.	47 - 133
Endrin	MS-06-22-01	< 0.005	0.258	0.270	0.250	0.250	µg/L	4.	29	103.	108.	36 - 139
Heptachlor	MS-06-22-01	< 0.005	0.269	0.277	0.250	0.250	µg/L	3.	22	107.	111.	48 - 126

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/03/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8080

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Aldrin	LCS	0.262	0.250	µg/L	105.	49 - 126
gamma-BHC	LCS	0.254	0.250	µg/L	101.	52 - 128
4,4'-DDT	LCS	0.243	0.250	µg/L	97.	34 - 146
Dieldrin	LCS	0.275	0.250	µg/L	110.	47 - 133
Endrin	LCS	0.252	0.250	µg/L	101.	36 - 139
Heptachlor	LCS	0.274	0.250	µg/L	110.	48 - 126

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8260

Samples Affected: 01-07110-1 - 01-07110-8TB

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 Compounds	EPA-5030	06/27/2001	SLL/SM	EPA-8260	06/27/2001	SLL/SM

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8260

Samples Affected: 01-07110-1 - 01-07110-8TB

Constituents	Method Blank Readings	Units
1,2-Dichloropropane	< 0.5	µg/L
1,3-Dichloropropane	< 0.5	µg/L
2,2-Dichloropropane	< 0.5	µg/L
1,1-Dichloropropene	< 0.5	µg/L
cis-1,3-Dichloropropene	< 0.5	µg/L
trans-1,3-Dichloropropene	< 0.5	µg/L
Ethyl Benzene	< 0.5	µg/L
Hexachlorobutadiene	< 0.5	µg/L
Isopropylbenzene	< 0.5	µg/L
p-Isopropyltoluene	< 0.5	µg/L
Methylene Chloride	< 1.	µg/L
Naphthalene	< 0.5	µg/L
n-Propylbenzene	< 0.5	µg/L
Styrene	< 0.5	µg/L
1,1,1,2-Tetrachloroethane	< 0.5	µg/L
1,1,2,2-Tetrachloroethane	< 0.5	µg/L
Tetrachloroethene	< 0.5	µg/L
Toluene	< 0.5	µg/L
1,2,3-Trichlorobenzene	< 0.5	µg/L
1,2,4-Trichlorobenzene	< 0.5	µg/L
1,1,1-Trichloroethane	< 0.5	µg/L
1,1,2-Trichloroethane	< 0.5	µg/L
Trichloroethene	< 0.5	µg/L
Trichlorofluoromethane	< 0.5	µg/L
1,2,3-Trichloropropane	< 1.	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.5	µg/L
1,2,4-Trimethylbenzene	< 0.5	µg/L
1,3,5-Trimethylbenzene	< 0.5	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8260

Samples Affected: 01-07110-1 - 01-07110-8TB

Constituents	Method Blank Readings	Units
Vinyl Chloride	< 0.5	µg/L
Total Xylenes	< 1.	µg/L
Acetone	<20.	µg/L
Acetonitrile	<20.	µg/L
Acrolein	<50.	µg/L
Acrylonitrile	<20.	µg/L
Allyl Chloride	< 5.	µg/L
t-Amyl methyl ether	< 1.	µg/L
t-Butyl alcohol	<50.	µg/L
Carbon Disulfide	< 2.	µg/L
Chloroprene	< 5.	µg/L
trans-1,4-Dichloro-2-butene	< 5.	µg/L
Diisopropyl ether	< 1.	µg/L
1,4-Dioxane	<300.	µg/L
2-Hexanone	<20.	µg/L
Iodomethane	< 2.	µg/L
Isobutyl alcohol	<50.	µg/L
Methacrylonitrile	<10.	µg/L
Methyl Ethyl Ketone	<20.	µg/L
4-Methyl-2-pentanone	<20.	µg/L
Methyl-t-butylether	< 0.5	µg/L
Propionitrile	<20.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8260

Samples Affected: 01-07110-1 - 01-07110-8TB

Quality Control Officer

Danette Bohm

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4100 Atlas Court * Bakersfield, CA 93308 * (661) 327-4911 * Fax (661) 327-1918 * www.bclabs.com

BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8260

Samples Affected: 01-07110-1 - 01-07110-8TB

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Benzene	OFW	< 0.5	24.	25.	25.	25.	µg/L	4.	20	98.	102.	80 - 120
Bromodichloromethane	OFW	< 0.5	24.	26.	25.	25.	µg/L	6.	20	97.	104.	80 - 120
Chlorobenzene	OFW	< 0.5	25.	26.	25.	25.	µg/L	5.	20	99.	104.	80 - 120
Chloroethane	OFW	< 0.5	25.	26.	25.	25.	µg/L	6.	20	100.	106.	80 - 120
1,4-Dichlorobenzene	OFW	< 0.5	25.	27.	25.	25.	µg/L	5.	20	101.	106.	80 - 120
1,1-Dichloroethane	OFW	< 0.5	25.	26.	25.	25.	µg/L	2.	20	100.	102.	80 - 120
1,1-Dichloroethene	OFW	< 0.5	25.	27.	25.	25.	µg/L	7.	20	100.	107.	80 - 120
Toluene	OFW	< 0.5	23.	25.	25.	25.	µg/L	8.	20	93.	101.	80 - 120
Trichloroethene	OFW	< 0.5	24.	26.	25.	25.	µg/L	8.	20	97.	106.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8260

Samples Affected: 01-07110-1 - 01-07110-8TB

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Benzene	CCV 1	22.	25.	µg/L	88.	80 - 120
Bromodichloromethane	CCV 1	23.	25.	µg/L	92.	80 - 120
Chlorobenzene	CCV 1	23.	25.	µg/L	94.	80 - 120
Chloroethane	CCV 1	22.	25.	µg/L	88.	80 - 120
1,4-Dichlorobenzene	CCV 1	24.	25.	µg/L	98.	80 - 120
1,1-Dichloroethane	CCV 1	22.	25.	µg/L	88.	80 - 120
1,1-Dichloroethene	CCV 1	22.	25.	µg/L	87.	80 - 120
Toluene	CCV 1	22.	25.	µg/L	87.	80 - 120
Trichloroethene	CCV 1	22.	25.	µg/L	90.	80 - 120

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 14:40
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-12, 06/20/2001 @ 14:40

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-1

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-12, 06/20/2001 @ 14:40

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	98.	76-114
Toluene-d8	99.	88-110
4-Bromofluorobenzene	100.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 11:10
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-13, 06/20/2001 @ 11:10

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-2

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-13, 06/20/2001 @ 11:10

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	104.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	99.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:40
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	0.09	µg/L	0.5	0.057	*02
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-11, 06/20/2001 @ 12:40

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.25	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-11, 06/20/2001 @ 12:40

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	102.	76-114
Toluene-d8	90.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 10:05
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-16, 06/20/2001 @ 10:05

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-16, 06/20/2001 @ 10:05

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	100.	76-114
Toluene-d8	97.	88-110
4-Bromofluorobenzene	100.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: LUCIO#2
Sample Matrix: Groundwater

Date Collected: 06/20/2001 @ 12:45
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Sample Description: GREGORY CANYON, GREGORY CANYON, LUCIO#2, 06/20/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-5

Sample Description: GREGORY CANYON, GREGORY CANYON, LUCIO#2, 06/20/2001 @ 12:45

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	102.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	102.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: EQUIP BLANK
Sample Matrix: Groundwater

Date Collected: 06/21/2001
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-6

Sample Description: GREGORY CANYON, GREGORY CANYON, EQUIP BLANK, 06/21/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.07	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	3.7	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-6

Sample Description: GREGORY CANYON, GREGORY CANYON, EQUIP BLANK, 06/21/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	104.	76-114
Toluene-d8	95.	88-110
4-Bromofluorobenzene	104.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: FIELD BLANK
Sample Matrix: Groundwater

Date Collected: 06/21/2001
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-7

Sample Description: GREGORY CANYON, GREGORY CANYON, FIELD BLANK, 06/21/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-7

Sample Description: GREGORY CANYON, GREGORY CANYON, FIELD BLANK, 06/21/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	103.	76-114
Toluene-d8	101.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-8TB

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: TRIP BLANK
Sample Matrix: Blank Water

Date Collected: 06/21/2001
Date Extracted: 06/27/2001
Date Analyzed: 06/27/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-8TB

Sample Description: GREGORY CANYON, GREGORY CANYON, TRIP BLANK, 06/21/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/21/2001
Laboratory No.: 01-07110-8TB

Sample Description: GREGORY CANYON, GREGORY CANYON, TRIP BLANK, 06/21/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	98.	76-114
Toluene-d8	99.	88-110
4-Bromofluorobenzene	105.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Acenaphthene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
1,4-Dichlorobenzene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
2,4-Dinitrotoluene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Hexachlorobenzene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Hexachlorobutadiene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Hexachloroethane	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Nitrobenzene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
N-Nitrosodi-n-propylamine	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Pyrene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
1,2,4-Trichlorobenzene	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
4-Chloro-3-methylphenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
2-Chlorophenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
2-Methylphenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
3- & 4-Methylphenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
4-Nitrophenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Pentachlorophenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
Phenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC
2,4,6-Trichlorophenol	EPA-3510	06/22/2001	WAE	EPA-8270	07/02/2001	SKC

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
Acenaphthene	< 2.	µg/L
Acenaphthylene	< 2.	µg/L
Aldrin	< 2.	µg/L
Aniline	< 5.	µg/L
Anthracene	< 2.	µg/L
Benzidine	<20.	µg/L
Benzo (a) anthracene	< 2.	µg/L
Benzo (b) fluoranthene	< 2.	µg/L
Benzo (k) fluoranthene	< 2.	µg/L
Benzo (a) pyrene	< 2.	µg/L
Benzo (ghi) perylene	< 2.	µg/L
Benzoic Acid	<10.	µg/L
Benzyl alcohol	< 2.	µg/L
Butyl Benzyl phthalate	< 2.	µg/L
alpha-BHC	< 2.	µg/L
beta-BHC	< 2.	µg/L
delta-BHC	< 2.	µg/L
gamma-BHC	< 2.	µg/L
bis(2-chloroethyl)ether	< 2.	µg/L
bis(2-chloroethoxy)methane	< 2.	µg/L
bis(2-chloro-1-methylethyl) et	< 2.	µg/L
bis(2-ethylhexyl)phthalate	< 2.	µg/L
4-Bromophenyl phenyl ether	< 2.	µg/L
4-Chloroaniline	< 2.	µg/L
2-Chloronaphthalene	< 2.	µg/L
4-Chlorophenyl phenyl ether	< 2.	µg/L
Chrysene	< 2.	µg/L
4,4-DDD'	< 2.	µg/L
4,4-DDE'	< 3.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
4,4-DDT'	< 2.	µg/L
Dibenzo (a,h) anthracene	< 3.	µg/L
Dibenzofuran	< 2.	µg/L
Di-n-butyl phthalate	< 2.	µg/L
1,2-Dichlorobenzene	< 2.	µg/L
1,3-Dichlorobenzene	< 2.	µg/L
1,4-Dichlorobenzene	< 2.	µg/L
3,3-Dichlorobenzidine	<10.	µg/L
Dieldrin	< 3.	µg/L
Diethyl phthalate	< 2.	µg/L
Dimethyl phthalate	< 2.	µg/L
2,4-Dinitrotoluene	< 2.	µg/L
2,6-Dinitrotoluene	< 2.	µg/L
Di-n-octylphthalate	< 2.	µg/L
1,2-Diphenylhydrazine	< 2.	µg/L
Endosulfan I	<10.	µg/L
Endosulfan II	<10.	µg/L
Endosulfan sulfate	< 3.	µg/L
Endrin	< 2.	µg/L
Endrin aldehyde	<10.	µg/L
Fluoranthene	< 2.	µg/L
Fluorene	< 2.	µg/L
Heptachlor	< 2.	µg/L
Heptachlor epoxide	< 2.	µg/L
Hexachlorobenzene	< 2.	µg/L
Hexachlorobutadiene	< 2.	µg/L
Hexachlorocyclopentadiene	< 2.	µg/L
Hexachloroethane	< 2.	µg/L
Indeno (1,2,3-cd) pyrene	< 2.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
Isophorone	< 2.	µg/L
2-Methylnaphthalene	< 2.	µg/L
Naphthalene	< 2.	µg/L
2-Naphthylamine	<20.	µg/L
2-Nitroaniline	< 2.	µg/L
3-Nitroaniline	< 2.	µg/L
4-Nitroaniline	< 5.	µg/L
Nitrobenzene	< 2.	µg/L
n-Nitrosodimethylamine	< 2.	µg/L
n-Nitrosodiphenylamine	< 2.	µg/L
N-Nitrosodi-n-propylamine	< 2.	µg/L
Phenanthrene	< 2.	µg/L
Pyrene	< 2.	µg/L
1,2,4-Trichlorobenzene	< 2.	µg/L
4-Chloro-3-methylphenol	< 5.	µg/L
2-Chlorophenol	< 2.	µg/L
2,4-Dichlorophenol	< 2.	µg/L
2,4-Dimethylphenol	< 2.	µg/L
2,4-Dinitrophenol	<10.	µg/L
2-Methyl-4,6-dinitrophenol	<10.	µg/L
2-Methylphenol	< 2.	µg/L
3- & 4-Methylphenol	< 2.	µg/L
2-Nitrophenol	< 2.	µg/L
4-Nitrophenol	< 2.	µg/L
Pentachlorophenol	<10.	µg/L
Phenol	< 2.	µg/L
2,4,5-Trichlorophenol	< 5.	µg/L
2,4,6-Trichlorophenol	< 5.	µg/L
Acetophenone	<10.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
2-Acetylaminofluorene	<10.	µg/L
4-Aminobiphenyl	<20.	µg/L
2,6-Dichlorophenol	<10.	µg/L
p-(Dimethylamine) azobenzene	<10.	µg/L
7,12-Dimethylbenz (a) anthracene	<10.	µg/L
3,3'-Dimethylbenzidine	<20.	µg/L
Diphenylamine	<10.	µg/L
Ethyl methacrylate	<10.	µg/L
Ethyl methanesulfonate	<10.	µg/L
Kepone	<20.	µg/L
Methapyrilene	<10.	µg/L
3-Methylcholanthrene	<10.	µg/L
Methyl methanesulfonate	<10.	µg/L
1,4-Napthoquinone	<20.	µg/L
1-Napthylamine	<20.	µg/L
5-Nitro-o-toluidine	<10.	µg/L
n-Nitrosodibutylamine	<10.	µg/L
n-Nitrosomethylethylamine	<10.	µg/L
n-Nitrosopiperidine	<10.	µg/L
n-Nitrosopyrrolidine	<10.	µg/L
Pentachlorobenzene	<10.	µg/L
Pentachloronitrobenzene	<10.	µg/L
Phenacetin	<10.	µg/L
1,4-Phenylenediamine	<20.	µg/L
Pronamide	<10.	µg/L
1,2,4,5-Tetrachlorobenzene	<10.	µg/L
2,3,4,6-Tetrachlorophenol	<10.	µg/L
o-Toluidine	<10.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	Method Blank Readings	Units
0,0,0-Triethyl phosphorothioate	<10.	µg/L
1,3,5-Trinitrobenzene	<10.	µg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	SDI2-MS1-06-22	< 2.	49.91	50.63	80.00	80.00	µg/L	1.	14	62.	63.	62 - 116
1,4-Dichlorobenzene	SDI2-MS1-06-22	< 2.	47.44	48.44	80.00	80.00	µg/L	2.	19	59.	61.	56 - 116
2,4-Dinitrotoluene	SDI2-MS1-06-22	< 2.	54.24	53.74	80.00	80.00	µg/L	1.	14	68.	67.	67 - 126
Hexachlorobenzene	SDI2-MS1-06-22	< 2.	50.58	49.29	80.00	80.00	µg/L	3.	10	63.	62.	59 - 137
Hexachlorobutadiene	SDI2-MS1-06-22	< 2.	39.94	39.45	80.00	80.00	µg/L	1.	18	50.	49.	38 - 117
Hexachloroethane	SDI2-MS1-06-22	< 2.	46.38	47.28	80.00	80.00	µg/L	2.	25	58.	59.	44 - 127
Nitrobenzene	SDI2-MS1-06-22	< 2.	61.40	60.52	80.00	80.00	µg/L	1.	16	77.	76.	67 - 111
N-Nitrosodi-n-propylamine	SDI2-MS1-06-22	< 2.	55.06	54.36	80.00	80.00	µg/L	1.	15	69.	68.	51 - 123
Pyrene	SDI2-MS1-06-22	< 2.	53.26	52.20	80.00	80.00	µg/L	2.	12	67.	65.	31 - 151
1,2,4-Trichlorobenzene	SDI2-MS1-06-22	< 2.	49.00	48.62	80.00	80.00	µg/L	1.	18	61.	61.	51 - 119
4-Chloro-3-methylphenol	SDI2-MS1-06-22	< 5.	62.31	62.03	80.00	80.00	µg/L	0.	13	78.	78.	53 - 134
2-Chlorophenol	SDI2-MS1-06-22	< 2.	64.81	64.26	80.00	80.00	µg/L	1.	15	81.	80.	54 - 123
2-Methylphenol	SDI2-MS1-06-22	< 2.	58.26	58.68	80.00	80.00	µg/L	1.	12	73.	73.	55 - 113
3- & 4-Methylphenol	SDI2-MS1-06-22	< 2.	49.10	49.38	80.00	80.00	µg/L	1.	14	61.	62.	43 - 110
4-Nitrophenol	SDI2-MS1-06-22	< 2.	25.71	23.21	80.00	80.00	µg/L	10.	24	32.	29.	19 - 71
Pentachlorophenol	SDI2-MS1-06-22	< 10.	64.87	60.98	80.00	80.00	µg/L	6.	17	81.	76.	35 - 167
Phenol	SDI2-MS1-06-22	< 2.	30.94	30.63	80.00	80.00	µg/L	1.	15	39.	38.	33 - 59
2,4,6-Trichlorophenol	SDI2-MS1-06-22	< 5.	60.66	59.36	80.00	80.00	µg/L	2.	14	76.	74.	42 - 134

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107110-1*8270

Samples Affected: 01-07110-1 - 01-07110-5

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Acenaphthene	LCS	46.40	80.00	µg/L	58.	62 - 116
1,4-Dichlorobenzene	LCS	43.81	80.00	µg/L	55.	56 - 116
2,4-Dinitrotoluene	LCS	48.64	80.00	µg/L	61.	67 - 126
Hexachlorobenzene	LCS	45.94	80.00	µg/L	57.	59 - 137
Hexachlorobutadiene	LCS	36.53	80.00	µg/L	46.	38 - 117
Hexachloroethane	LCS	42.81	80.00	µg/L	54.	44 - 127
Nitrobenzene	LCS	57.56	80.00	µg/L	72.	67 - 111
N-Nitrosodi-n-propylamine	LCS	50.32	80.00	µg/L	63.	51 - 123
Pyrene	LCS	46.12	80.00	µg/L	58.	31 - 151
1,2,4-Trichlorobenzene	LCS	45.45	80.00	µg/L	57.	51 - 119
4-Chloro-3-methylphenol	LCS	58.79	80.00	µg/L	73.	53 - 134
2-Chlorophenol	LCS	60.16	80.00	µg/L	75.	54 - 123
2-Methylphenol	LCS	53.71	80.00	µg/L	67.	55 - 113
3- & 4-Methylphenol	LCS	46.00	80.00	µg/L	58.	43 - 110
4-Nitrophenol	LCS	23.20	80.00	µg/L	29.	19 - 71
Pentachlorophenol	LCS	59.03	80.00	µg/L	74.	35 - 167
Phenol	LCS	28.74	80.00	µg/L	36.	33 - 59
2,4,6-Trichlorophenol	LCS	56.15	80.00	µg/L	70.	42 - 134

The LCS recoveries for 1,4-Dichlorobenzene, Acenaphthene, 2,4-Dinitrotoluene and Hexachlorobenzene are outside QC limits.

Quality Control Officer

Danette Bohm

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BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 1 Of 2 3

Submission #: 01-07110 | Project Code: | TB Batch # 323-sc

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☑ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☑ YES ☐ NO

Ice Chest ID _____ Date/Time 6-21-01
Temperature: 2.4 °C 1555
Thermometer ID: 80 Analyst Init DJR
Emissivity 1.00
Container QT PG

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL			1		1																			
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS	1		1		1																			
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE	1		1		1																			
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080	1		1		1																			
QT EPA 515.1/8150	1		1		1																			
QT EPA ~~525~~ 625	2		2		2																			
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments: missing Travel Blank, received no cyanide bottles

Sample Numbering Completed By: SS Date/Time: 6/21 2130

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2nd

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 2 Of 2

Submission #: 01-07110 | Project Code: | TB Batch # 323-c

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID _____ Date/Time 6-21-01
Temperature: 5.2 °C 1550
Thermometer ID: 80 Analyst Init DJR
Emissivity 1.00
Container B+PE

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL	1	1		1																				
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS		1		1																				
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE		1		1																				
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL	2	2	2	2	2	1	1																	
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080		1		1																				
QT EPA 515.1/8150		1		1																				
QT EPA ~~525~~ 1025		2		2																				
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT OA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments: Missing Travel Blank, received no cyanide bottles

Sample Numbering Completed By: SS Date/Time: 6/21 2200

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BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 3 Of 3

Submission #: 01-07110 | Project Code: | TB Batch # 323

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID Blue/white Date/Time 6/22
Temperature: 4.6 °C 1730
Thermometer ID: 30 Analyst Init JRM
Emissivity 1.00
Container Temp blank

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK 6/23	X							1																
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT OA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: SS Date/Time: 6/23 0100

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

01-07151

OK to run 8270 & 8080 past holding holding time per Bill Lopez

BAS
BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

6/29 Due to lab error 6/29 TG

PROJECT INFORMATION

PROJECT NAME: Gregory Canyon
JOB NUMBER:
PROJECT MANAGER: Sarah Battelle
LABORATORY: BC Labs
SHIPMENT METHOD: Lab Courier
TURNAROUND TIME:
DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

	BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	Chloride Sulfate, Nitrate (N) pH, TDS	Metals (Ca, Mg, Na)	CAM Metals (Except Molybdenum) + Tin)	8260 (Volatile Organics including isobutyl alcohol	8270 (SVOCs including organophosphorus pesticides	Cyanide, Sulfide	8150 (Chlorinated Herbicides)	8080 (Organochlorine Pesticides & PCBs)
1	SW-1		6-21-01	1320	SW	9	X	X	X	X	X	X	X	X
2	SW-2			1245	SW	9	X	X	X	X	X	X	X	X
3	GLA-2			1200	GW	9	X	X	X	X	X	X	X	X
4	GLA-4			0900		9	X	X	X	X	X	X	X	X
5	GLA-10			1050		9	X	X	X	X	X	X	X	X
6	GLA-14			0930		9	X	X	X	X	X	X	X	X
7	MWD#34			0955		9	X	X	X	X	X	X	X	X
8	FIELD BLANK			—	W	1				X				
9	EQUIP. BLANK			—	W	1				X				
10	Trip Blank TB			—	W	1				X				

* Amber w/ no description set them aside. Client will inform us what to do later AC 6/25/01

CHK BY DISTRIBUTION
MA BGSB
SUB-OUT

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SF
DO BOD MBAS C O

Ricardo Ramirez 6-21-01 1435
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

6/22/01 6-22-01 1300
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

6-22-01 1723 Stacy Stricklind 6/22/01 1730
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed
Sample(s):
Integrity
Chilled
Sealed

COMMENTS:
Equip. & field blanks collected w/ BAS DI water
No container provided for Cyanide perameter
-2, -3
cannot run 6270/8080 no labels (cancel)

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

01 07151 OK to run 8270 + 8080 past holding holding time per Bill Lopez

BAS
BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

Page 1 of 1

PROJECT INFORMATION

PROJECT NAME: Gregory Canyon
JOB NUMBER:
PROJECT MANAGER: Sarah Battelle
LABORATORY: BC Labs
SHIPMENT METHOD: Lab Courier
TURNAROUND TIME:

DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

S 6/29 Due to lab error 6/29 TG

	BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	Chloride, Sulfate, Nitrate (N), pH, TDS	Metals (Ca, Mg, Na)	CAM Metals (Except Molybdenum) + Tin)	8260 (Volatile Organics including isobutyl alcohol)	8270 (SVOCs including organophosphorus pesticides)	Cyanide, Sulfide	8150 (Chlorinated Herbicides)	8080 (Organochlorine Pesticides & PCBs)
1	SW-1		6-21-01	1320	SW	9	X	X	X	X	X	X	X	X
2	SW-2			1245	SW	9	X	X	X	X	X	X	X	X
3	GLA-2			1200	GW	9	X	X	X	X	X	X	X	X
4	GLA-4			0900		9	X	X	X	X	X	X	X	X
5	GLA-10			1050		9	X	X	X	X	X	X	X	X
6	GLA-14			0930		9	X	X	X	X	X	X	X	X
7	MWD#34			0955		9	X	X	X	X	X	X	X	X
8	FIELD BLANK			—	W	1				X				
9	EQUIP. BLANK			—	W	1				X				
10	Trip Blank			—	W	1				X				

MABGSB

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Ricardo Ramirez	6-21-01 1435	[signature]
[signature]	6/22/01	[signature] 6-22-01 1300
[signature]	6-22-01 1723	Stacey Stricklind 6/22/01 1730

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed _____
Sample(s):
Integrity _____
Chilled _____
Sealed _____

COMMENTS:

Equip. & field blanks collected w/ BAS DI water
No container provided for Cyanide perameter

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 1 Of 4

Submission #: 01-07151 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? ~~Yes ☒~~ No ☒ 6/22

COC Received

☒ YES ☐ NO

Ice Chest ID Red/White Date/Time 6/22/20
Temperature: 3.8 °C
Thermometer ID: 80 Analyst Init JPM
Emissivity 100
Container Temp blank 202

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL		1	1																					
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS	1	1	1																					
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE	1	1	1																					
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150			1																					
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								
* no cyanide Bottles																								

Comments: received 6 Ambers with no descriptions on them

Sample Numbering Completed By: SS Date/Time: 6/22 2045 I could not match to COC

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BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 2 Of 4

Submission #: 01-07151 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID blue/white Date/Time 6/22/730
Temperature: 4.6 °C
Thermometer ID: 80 Analyst Init RM
Emissivity 100
Container Templblank.

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL	1			1			1																	
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK										1														
40ml VOA VIAL	2	2	2	2	2	2	2	1	1															
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080			1				1																	
QT EPA 515.1/8150	1	1																						
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: SS Date/Time: 6/22 2035

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BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 3 Of 4

Submission #: 01-07151 **Project Code:** **TB Batch #**

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☒ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received
☒ YES ☐ NO

Ice Chest ID blueunit Date/Time 6/22 1730
Temperature: 5.3 °C
Thermometer ID: 80 Analyst Init JRM
Emissivity 100
Container 2oz Temp blank

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL					1	1																		
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS					1	1																		
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE					1	1																		
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080					1	1																		
QT EPA 515.1/8150					1	1																		
QT EPA ~~525~~ 625					2	2																		
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: SS Date/Time: 6/22 2030

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BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 4 Of 4

Submission #: 01-07151 **Project Code:** **TB Batch #**

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID Blue/White Date/Time 6/22/01
Temperature: 2.4 °C 1730
Thermometer ID: 80 Analyst Init SS
Emissivity 98
Container RTA

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS				1			1																	
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE				1			1																	
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080	1			1																				
QT EPA 515.1/8150				1			1																	
QT EPA ~~525~~ 625	2			1			2																	
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: [signature] Date/Time: 06/22/00

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-1
Sampling Date/Time: 06/21/2001 @ 13:20

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		94.	mg/L	0.05	0.02	EPA-6010
Magnesium		35.	mg/L	0.05	0.02	EPA-6010
Sodium		73.	mg/L	0.5	0.07	EPA-6010
Sulfate		204.	mg/L	1.0	0.25	EPA-300.0
Chloride		113.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*02	0.059	mg/L	0.1	0.020	EPA-300.0
pH		7.98	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		703.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.
4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/11/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-2
Sampling Date/Time: 06/21/2001 @ 12:45

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		96.	mg/L	0.05	0.02	EPA-6010
Magnesium		36.	mg/L	0.05	0.02	EPA-6010
Sodium		75.	mg/L	0.5	0.07	EPA-6010
Sulfate		195.	mg/L	1.0	0.25	EPA-300.0
Chloride		111.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	*02	0.030	mg/L	0.1	0.020	EPA-300.0
pH		7.86	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		700.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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Marna Atencio
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-2
Sampling Date/Time: 06/21/2001 @ 12:00

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	170.	mg/L	0.05	0.02	EPA-6010
Magnesium	100.	mg/L	0.05	0.02	EPA-6010
Sodium	230.	mg/L	0.5	0.07	EPA-6010
Sulfate	160.	mg/L	5.0	1.3	EPA-300.0
Chloride	529.	mg/L	2.5	0.45	EPA-300.0
Nitrate as N	42.9	mg/L	0.5	0.10	EPA-300.0
pH	7.34	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	1620.	mg/L	100.	50.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-4
Sampling Date/Time: 06/21/2001 @ 09:00

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	72.	mg/L	0.05	0.02	EPA-6010
Magnesium	22.	mg/L	0.05	0.02	EPA-6010
Sodium	74.	mg/L	0.5	0.07	EPA-6010
Sulfate	35.	mg/L	1.0	0.25	EPA-300.0
Chloride	78.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	1.48	mg/L	0.1	0.020	EPA-300.0
pH	7.03	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	490.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-10
Sampling Date/Time: 06/21/2001 @ 10:50

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	62.	mg/L	0.05	0.02	EPA-6010
Magnesium	36.	mg/L	0.05	0.02	EPA-6010
Sodium	88.	mg/L	0.5	0.07	EPA-6010
Sulfate	60.	mg/L	1.0	0.25	EPA-300.0
Chloride	144.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	6.17	mg/L	0.1	0.020	EPA-300.0
pH	7.18	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	590.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-14
Sampling Date/Time: 06/21/2001 @ 09:30

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Calcium		75.	mg/L	0.05	0.02	EPA-6010
Magnesium		43.	mg/L	0.05	0.02	EPA-6010
Sodium		92.	mg/L	0.5	0.07	EPA-6010
Sulfate		75.	mg/L	1.0	0.25	EPA-300.0
Chloride		155.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N		15.1	mg/L	0.1	0.020	EPA-300.0
pH		7.29	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C		667.	mg/L	40.	20.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	*01	None Detected	mg/L	0.5	0.25	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.

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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: MWD#34
Sampling Date/Time: 06/21/2001 @ 09:55

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Calcium	79.	mg/L	0.05	0.02	EPA-6010
Magnesium	28.	mg/L	0.05	0.02	EPA-6010
Sodium	61.	mg/L	0.5	0.07	EPA-6010
Sulfate	140.	mg/L	1.0	0.25	EPA-300.0
Chloride	78.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	None Detected	mg/L	0.1	0.020	EPA-300.0
pH	7.66	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	560.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-376.2

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Marna Atencio
Department Supervisor

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-1
Sampling Date/Time: 06/21/2001 @ 13:20

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Dissolved Barium		82.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead	*	0.7	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver	*02	5.	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		10.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		5.0	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
* = Sample result is between the MDL and PQL.
Continuing calibration blank result is between the MDL and PQL.
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-2
Sampling Date/Time: 06/21/2001 @ 12:45

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		88.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver	*02	6.	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium	*02	8.	µg/L	10.	3.	EPA-6010
Dissolved Zinc	*02	1.4	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-2
Sampling Date/Time: 06/21/2001 @ 12:00

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		66.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury	*02	0.13	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver	*02	3.	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		40.	µg/L	10.	3.	EPA-6010
Dissolved Zinc	*02	5.7	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Laboratory Director

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WATER ANALYSIS
(METALS)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-4
Sampling Date/Time: 06/21/2001 @ 09:00

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		30.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper	*02	4.	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		20.	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium	*02	7.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		450.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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WATER ANALYSIS
(METALS)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-10
Sampling Date/Time: 06/21/2001 @ 10:50

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony	*02	9.	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		64.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin		None Detected	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc		72.	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-14
Sampling Date/Time: 06/21/2001 @ 09:30

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		130.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel	*02	4.	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Tin	*02	3.	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		30.	µg/L	10.	3.	EPA-6010
Dissolved Zinc	*02	9.2	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: MWD#34
Sampling Date/Time: 06/21/2001 @ 09:55

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Dissolved Antimony		None Detected	µg/L	100.	8.	EPA-6010
Dissolved Arsenic		None Detected	µg/L	2.	0.7	EPA-7060
Dissolved Barium		100.	µg/L	10.	0.9	EPA-6010
Dissolved Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Dissolved Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Chromium		None Detected	µg/L	10.	4.	EPA-6010
Dissolved Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Dissolved Copper		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Lead		None Detected	µg/L	1.	0.40	EPA-7421
Dissolved Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Dissolved Nickel		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Selenium	*01	None Detected	µg/L	4.	0.6	EPA-7740
Dissolved Silver	*02	4.	µg/L	10.	3.	EPA-6010
Dissolved Tin	*02	4.	µg/L	5.	2.	EPA-282.2
Dissolved Thallium		None Detected	µg/L	1.	0.7	EPA-7841
Dissolved Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Dissolved Zinc	*02	2.8	µg/L	10.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Sample was filtered and acidified in the field.

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 06/21/2001 @ 13:20
Date Extracted: 06/24/2001
Date Analyzed: 07/18/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Aldrin	None Detected	µg/L	0.005	0.0015	
alpha-BHC	None Detected	µg/L	0.005	0.0008	
beta-BHC	None Detected	µg/L	0.005	0.0011	
delta-BHC	None Detected	µg/L	0.005	0.0008	
gamma-BHC	None Detected	µg/L	0.005	0.0009	
Chlordane (Technical)	None Detected	µg/L	0.1	0.05	
4,4'-DDD	None Detected	µg/L	0.005	0.0011	
4,4'-DDE	None Detected	µg/L	0.005	0.0009	*
4,4'-DDT	None Detected	µg/L	0.005	0.0017	
Dieldrin	None Detected	µg/L	0.005	0.0014	
Endosulfan I	None Detected	µg/L	0.005	0.0011	
Endosulfan II	None Detected	µg/L	0.005	0.0012	
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011	
Endrin	None Detected	µg/L	0.005	0.0015	*
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034	
Heptachlor	None Detected	µg/L	0.005	0.0006	
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009	
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005	
Methoxychlor	None Detected	µg/L	0.005	0.0009	
Toxaphene	None Detected	µg/L	2.	1.	
PCB-1016	None Detected	µg/L	0.2	0.1	
PCB-1221	None Detected	µg/L	0.2	0.1	
PCB-1232	None Detected	µg/L	0.2	0.1	
PCB-1242	None Detected	µg/L	0.2	0.025	
PCB-1248	None Detected	µg/L	0.2	0.022	
PCB-1254	None Detected	µg/L	0.2	0.041	
PCB-1260	None Detected	µg/L	0.2	0.046	
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1	
Surrogates					
TCMX	91.	%	51-118		
Dibutyl chlorendate	109.	%	62-142		

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-1, 06/21/2001 @ 13:20

Flag Explanations:
* = ICV Criteria not met.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 12:00
Date Extracted: 06/24/2001
Date Analyzed: 07/18/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Aldrin	None Detected	µg/L	0.005	0.0015	
alpha-BHC	None Detected	µg/L	0.005	0.0008	
beta-BHC	None Detected	µg/L	0.005	0.0011	
delta-BHC	None Detected	µg/L	0.005	0.0008	
gamma-BHC	None Detected	µg/L	0.005	0.0009	
Chlordane (Technical)	None Detected	µg/L	0.1	0.05	
4,4'-DDD	None Detected	µg/L	0.005	0.0011	
4,4'-DDE	None Detected	µg/L	0.005	0.0009	*
4,4'-DDT	None Detected	µg/L	0.005	0.0017	
Dieldrin	None Detected	µg/L	0.005	0.0014	
Endosulfan I	None Detected	µg/L	0.005	0.0011	
Endosulfan II	None Detected	µg/L	0.005	0.0012	
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011	
Endrin	None Detected	µg/L	0.005	0.0015	*
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034	
Heptachlor	None Detected	µg/L	0.005	0.0006	
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009	
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005	
Methoxychlor	None Detected	µg/L	0.005	0.0009	
Toxaphene	None Detected	µg/L	2.	1.	
PCB-1016	None Detected	µg/L	0.2	0.1	
PCB-1221	None Detected	µg/L	0.2	0.1	
PCB-1232	None Detected	µg/L	0.2	0.1	
PCB-1242	None Detected	µg/L	0.2	0.025	
PCB-1248	None Detected	µg/L	0.2	0.022	
PCB-1254	None Detected	µg/L	0.2	0.041	
PCB-1260	None Detected	µg/L	0.2	0.046	
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1	
Surrogates					
TCMX	87.	%	51-118		
Dibutyl chlorendate	95.	%	62-142		

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-2, 06/21/2001 @ 12:00

Flag Explanations:
* = ICV criteria not met.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:00
Date Extracted: 06/24/2001
Date Analyzed: 07/18/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Aldrin	None Detected	µg/L	0.005	0.0015	
alpha-BHC	None Detected	µg/L	0.005	0.0008	
beta-BHC	None Detected	µg/L	0.005	0.0011	
delta-BHC	None Detected	µg/L	0.005	0.0008	
gamma-BHC	None Detected	µg/L	0.005	0.0009	
Chlordane (Technical)	None Detected	µg/L	0.1	0.05	
4,4'-DDD	None Detected	µg/L	0.005	0.0011	
4,4'-DDE	None Detected	µg/L	0.005	0.0009	*
4,4'-DDT	None Detected	µg/L	0.005	0.0017	
Dieldrin	None Detected	µg/L	0.005	0.0014	
Endosulfan I	None Detected	µg/L	0.005	0.0011	
Endosulfan II	None Detected	µg/L	0.005	0.0012	
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011	
Endrin	None Detected	µg/L	0.005	0.0015	*
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034	
Heptachlor	None Detected	µg/L	0.005	0.0006	
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009	
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005	
Methoxychlor	None Detected	µg/L	0.005	0.0009	
Toxaphene	None Detected	µg/L	2.	1.	
PCB-1016	None Detected	µg/L	0.2	0.1	
PCB-1221	None Detected	µg/L	0.2	0.1	
PCB-1232	None Detected	µg/L	0.2	0.1	
PCB-1242	None Detected	µg/L	0.2	0.025	
PCB-1248	None Detected	µg/L	0.2	0.022	
PCB-1254	None Detected	µg/L	0.2	0.041	
PCB-1260	None Detected	µg/L	0.2	0.046	
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1	
Surrogates					
TCMX	81.	%	51-118		
Dibutyl chlorendate	94.	%	62-142		

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-4, 06/21/2001 @ 09:00

Flag Explanations:
* = ICV criteria not met.
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Stuart G. Buttram
Department Supervisor

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 10:50
Date Extracted: 06/24/2001
Date Analyzed: 07/18/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Aldrin	None Detected	µg/L	0.005	0.0015	
alpha-BHC	None Detected	µg/L	0.005	0.0008	
beta-BHC	None Detected	µg/L	0.005	0.0011	
delta-BHC	None Detected	µg/L	0.005	0.0008	
gamma-BHC	None Detected	µg/L	0.005	0.0009	
Chlordane (Technical)	None Detected	µg/L	0.1	0.05	
4,4'-DDD	None Detected	µg/L	0.005	0.0011	
4,4'-DDE	None Detected	µg/L	0.005	0.0009	*
4,4'-DDT	None Detected	µg/L	0.005	0.0017	
Dieldrin	None Detected	µg/L	0.005	0.0014	
Endosulfan I	None Detected	µg/L	0.005	0.0011	
Endosulfan II	None Detected	µg/L	0.005	0.0012	
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011	
Endrin	None Detected	µg/L	0.005	0.0015	*
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034	
Heptachlor	None Detected	µg/L	0.005	0.0006	
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009	
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005	
Methoxychlor	None Detected	µg/L	0.005	0.0009	
Toxaphene	None Detected	µg/L	2.	1.	
PCB-1016	None Detected	µg/L	0.2	0.1	
PCB-1221	None Detected	µg/L	0.2	0.1	
PCB-1232	None Detected	µg/L	0.2	0.1	
PCB-1242	None Detected	µg/L	0.2	0.025	
PCB-1248	None Detected	µg/L	0.2	0.022	
PCB-1254	None Detected	µg/L	0.2	0.041	
PCB-1260	None Detected	µg/L	0.2	0.046	
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1	
Surrogates					
TCMX	79.	%	51-118		
Dibutyl chlorendate	86.	%	62-142		

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-10, 06/21/2001 @ 10:50

Flag Explanations:
* = ICV criteria not met.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:30
Date Extracted: 06/24/2001
Date Analyzed: 07/18/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Aldrin	None Detected	µg/L	0.005	0.0015	
alpha-BHC	None Detected	µg/L	0.005	0.0008	
beta-BHC	None Detected	µg/L	0.005	0.0011	
delta-BHC	None Detected	µg/L	0.005	0.0008	
gamma-BHC	None Detected	µg/L	0.005	0.0009	
Chlordane (Technical)	None Detected	µg/L	0.1	0.05	
4,4'-DDD	None Detected	µg/L	0.005	0.0011	
4,4'-DDE	None Detected	µg/L	0.005	0.0009	*
4,4'-DDT	None Detected	µg/L	0.005	0.0017	
Dieldrin	None Detected	µg/L	0.005	0.0014	
Endosulfan I	None Detected	µg/L	0.005	0.0011	
Endosulfan II	None Detected	µg/L	0.005	0.0012	
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011	
Endrin	None Detected	µg/L	0.005	0.0015	*
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034	
Heptachlor	None Detected	µg/L	0.005	0.0006	
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009	
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005	
Methoxychlor	None Detected	µg/L	0.005	0.0009	
Toxaphene	None Detected	µg/L	2.	1.	
PCB-1016	None Detected	µg/L	0.2	0.1	
PCB-1221	None Detected	µg/L	0.2	0.1	
PCB-1232	None Detected	µg/L	0.2	0.1	
PCB-1242	None Detected	µg/L	0.2	0.025	
PCB-1248	None Detected	µg/L	0.2	0.022	
PCB-1254	None Detected	µg/L	0.2	0.041	
PCB-1260	None Detected	µg/L	0.2	0.046	
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1	
Surrogates					
TCMX	87.	%	51-118		
Dibutyl chlorendate	92.	%	62-142		

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-14, 06/21/2001 @ 09:30

Flag Explanations:
* = ICV criteria not met.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: MWD#34
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:55
Date Extracted: 06/24/2001
Date Analyzed: 07/18/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Aldrin	None Detected	µg/L	0.005	0.0015	
alpha-BHC	None Detected	µg/L	0.005	0.0008	
beta-BHC	None Detected	µg/L	0.005	0.0011	
delta-BHC	None Detected	µg/L	0.005	0.0008	
gamma-BHC	None Detected	µg/L	0.005	0.0009	
Chlordane (Technical)	None Detected	µg/L	0.1	0.05	
4,4'-DDD	None Detected	µg/L	0.005	0.0011	
4,4'-DDE	None Detected	µg/L	0.005	0.0009	*
4,4'-DDT	None Detected	µg/L	0.005	0.0017	
Dieldrin	None Detected	µg/L	0.005	0.0014	
Endosulfan I	None Detected	µg/L	0.005	0.0011	
Endosulfan II	None Detected	µg/L	0.005	0.0012	
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011	
Endrin	None Detected	µg/L	0.005	0.0015	*
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034	
Heptachlor	None Detected	µg/L	0.005	0.0006	
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009	
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005	
Methoxychlor	None Detected	µg/L	0.005	0.0009	
Toxaphene	None Detected	µg/L	2.	1.	
PCB-1016	None Detected	µg/L	0.2	0.1	
PCB-1221	None Detected	µg/L	0.2	0.1	
PCB-1232	None Detected	µg/L	0.2	0.1	
PCB-1242	None Detected	µg/L	0.2	0.025	
PCB-1248	None Detected	µg/L	0.2	0.022	
PCB-1254	None Detected	µg/L	0.2	0.041	
PCB-1260	None Detected	µg/L	0.2	0.046	
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1	
Surrogates					
TCMX	88.	%	51-118		
Dibutyl chlorendate	109.	%	62-142		

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

BRYAN A. STIRRAT & ASSOCIATES
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/19/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Sample Description: GREGORY CANYON, GREGORY CANYON, MWD#34, 06/21/2001 @ 09:55

Flag Explanations:
* = ICV criteria not met.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/05/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 06/21/2001 @ 13:20
Date Extracted: 06/25/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*08
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	66.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*08 = Sample specific matrix spike precision not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/05/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 12:00
Date Extracted: 06/25/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*08
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	75.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*08 = Sample specific matrix spike precision not within established limits.

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

BRYAN A. STIRRAT & ASSOCIATES
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/05/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:00
Date Extracted: 06/25/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*08
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	79.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*08 = Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/05/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 10:50
Date Extracted: 06/25/2001
Date Analyzed: 06/29/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*08
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	89.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*08 = Sample specific matrix spike precision not within established limits.

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Chlorinated Herbicides
(EPA Method 8150)

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Attn: RANDY BAUER 909-860-7777

Date Reported: 07/05/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:30
Date Extracted: 06/25/2001
Date Analyzed: 06/29/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*08
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	82.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*08 = Sample specific matrix spike precision not within established limits.

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/05/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: MWD#34
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:55
Date Extracted: 06/25/2001
Date Analyzed: 06/29/2001

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*08
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	81.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*08 = Sample specific matrix spike precision not within established limits.

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 06/21/2001 @ 13:20
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-1, 06/21/2001 @ 13:20

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-1, 06/21/2001 @ 13:20

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	98.	76-114
Toluene-d8	101.	88-110
4-Bromofluorobenzene	101.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-2

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: Sewer Effluent

Date Collected: 06/21/2001 @ 12:45
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-2

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-2, 06/21/2001 @ 12:45

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-2

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-2, 06/21/2001 @ 12:45

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	100.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	104.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 12:00
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-2, 06/21/2001 @ 12:00

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-3

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-2, 06/21/2001 @ 12:00

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	98.	76-114
Toluene-d8	99.	88-110
4-Bromofluorobenzene	105.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:00
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	0.11	µg/L	0.5	0.044	*02
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	0.08	µg/L	0.5	0.066	*02
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	0.41	µg/L	0.5	0.057	*02
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	0.26	µg/L	0.5	0.094	*02
n-Propylbenzene	0.12	µg/L	0.5	0.053	*02

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-4, 06/21/2001 @ 09:00

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	1.4	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	0.52	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	0.21	µg/L	0.5	0.066	*02
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	2.7	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-4, 06/21/2001 @ 09:00

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	104.	76-114
Toluene-d8	98.	88-110
4-Bromofluorobenzene	101.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 10:50
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Benzene	None Detected	µg/L	0.5	0.044	
Bromobenzene	None Detected	µg/L	0.5	0.059	
Bromochloromethane	None Detected	µg/L	0.5	0.086	
Bromodichloromethane	None Detected	µg/L	0.5	0.286	
Bromoform	None Detected	µg/L	0.5	0.139	
Bromomethane	None Detected	µg/L	1.	0.063	
n-Butylbenzene	None Detected	µg/L	0.5	0.119	
sec-Butylbenzene	None Detected	µg/L	0.5	0.070	
tert-Butylbenzene	None Detected	µg/L	0.5	0.066	
Carbon tetrachloride	None Detected	µg/L	0.5	0.053	
Chlorobenzene	None Detected	µg/L	0.5	0.082	
Chloroethane	None Detected	µg/L	0.5	0.053	
Chloroform	None Detected	µg/L	0.5	0.164	
Chloromethane	None Detected	µg/L	0.5	0.158	
2-Chlorotoluene	None Detected	µg/L	0.5	0.094	
4-Chlorotoluene	None Detected	µg/L	0.5	0.109	
Dibromochloromethane	None Detected	µg/L	0.5	0.089	
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282	
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041	
Dibromomethane	None Detected	µg/L	0.5	0.187	
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092	
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076	
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056	
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038	
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087	
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095	
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095	
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057	
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078	
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066	
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061	
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132	
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070	
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054	
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044	
Ethyl Benzene	0.07	µg/L	0.5	0.057	*02
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141	
Isopropylbenzene	None Detected	µg/L	0.5	0.042	
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074	
Methylene Chloride	None Detected	µg/L	1.	0.392	
Naphthalene	None Detected	µg/L	0.5	0.094	
n-Propylbenzene	None Detected	µg/L	0.5	0.053	

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-10, 06/21/2001 @ 10:50

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-10, 06/21/2001 @ 10:50

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	105.	76-114
Toluene-d8	101.	88-110
4-Bromofluorobenzene	106.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:30
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-14, 06/21/2001 @ 09:30

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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(EPA Method 8260)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-14, 06/21/2001 @ 09:30

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	103.	76-114
Toluene-d8	97.	88-110
4-Bromofluorobenzene	98.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

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Department Supervisor

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(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: MWD#34
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:55
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Sample Description: GREGORY CANYON, GREGORY CANYON, MWD#34, 06/21/2001 @ 09:55

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Sample Description: GREGORY CANYON, GREGORY CANYON, MWD#34, 06/21/2001 @ 09:55

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	106.	76-114
Toluene-d8	92.	88-110
4-Bromofluorobenzene	104.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-8

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: FIELD BLANK
Sample Matrix: DI WATER

Date Collected: 06/21/2001
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-8

Sample Description: GREGORY CANYON, GREGORY CANYON, FIELD BLANK, 06/21/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	0.36	µg/L	0.5	0.094	*02
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-8

Sample Description: GREGORY CANYON, GREGORY CANYON, FIELD BLANK, 06/21/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	102.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	100.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
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BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-9

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: EQUIP. BLANK
Sample Matrix: DI WATER

Date Collected: 06/21/2001
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-9

Sample Description: GREGORY CANYON, GREGORY CANYON, EQUIP. BLANK, 06/21/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	0.09	µg/L	0.5	0.047	*02
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
Ethyl Methacrylate	None Detected	µg/L	20.	10.	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-9

Sample Description: GREGORY CANYON, GREGORY CANYON, EQUIP. BLANK, 06/21/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	99.	76-114
Toluene-d8	100.	88-110
4-Bromofluorobenzene	103.	86-115

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-10TB

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: TRIP BLANK
Sample Matrix: Blank Water

Date Collected: 06/21/2001
Date Extracted: 06/28/2001
Date Analyzed: 06/28/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level
Benzene	None Detected	µg/L	0.5	0.044
Bromobenzene	None Detected	µg/L	0.5	0.059
Bromochloromethane	None Detected	µg/L	0.5	0.086
Bromodichloromethane	None Detected	µg/L	0.5	0.286
Bromoform	None Detected	µg/L	0.5	0.139
Bromomethane	None Detected	µg/L	1.	0.063
n-Butylbenzene	None Detected	µg/L	0.5	0.119
sec-Butylbenzene	None Detected	µg/L	0.5	0.070
tert-Butylbenzene	None Detected	µg/L	0.5	0.066
Carbon tetrachloride	None Detected	µg/L	0.5	0.053
Chlorobenzene	None Detected	µg/L	0.5	0.082
Chloroethane	None Detected	µg/L	0.5	0.053
Chloroform	None Detected	µg/L	0.5	0.164
Chloromethane	None Detected	µg/L	0.5	0.158
2-Chlorotoluene	None Detected	µg/L	0.5	0.094
4-Chlorotoluene	None Detected	µg/L	0.5	0.109
Dibromochloromethane	None Detected	µg/L	0.5	0.089
1,2-Dibromo-3-Chloropropane	None Detected	µg/L	1.	0.282
1,2-Dibromoethane	None Detected	µg/L	0.5	0.041
Dibromomethane	None Detected	µg/L	0.5	0.187
1,2-Dichlorobenzene	None Detected	µg/L	0.5	0.092
1,3-Dichlorobenzene	None Detected	µg/L	0.5	0.076
1,4-Dichlorobenzene	None Detected	µg/L	0.5	0.056
Dichlorodifluoromethane	None Detected	µg/L	0.5	0.038
1,1-Dichloroethane	None Detected	µg/L	0.5	0.087
1,2-Dichloroethane	None Detected	µg/L	0.5	0.095
1,1-Dichloroethene	None Detected	µg/L	0.5	0.095
cis-1,2-Dichloroethene	None Detected	µg/L	0.5	0.057
trans-1,2-Dichloroethene	None Detected	µg/L	0.5	0.078
1,2-Dichloropropane	None Detected	µg/L	0.5	0.066
1,3-Dichloropropane	None Detected	µg/L	0.5	0.061
2,2-Dichloropropane	None Detected	µg/L	0.5	0.132
1,1-Dichloropropene	None Detected	µg/L	0.5	0.070
cis-1,3-Dichloropropene	None Detected	µg/L	0.5	0.054
trans-1,3-Dichloropropene	None Detected	µg/L	0.5	0.044
Ethyl Benzene	None Detected	µg/L	0.5	0.057
Hexachlorobutadiene	None Detected	µg/L	0.5	0.141
Isopropylbenzene	None Detected	µg/L	0.5	0.042
p-Isopropyltoluene	None Detected	µg/L	0.5	0.074
Methylene Chloride	None Detected	µg/L	1.	0.392
Naphthalene	None Detected	µg/L	0.5	0.094
n-Propylbenzene	None Detected	µg/L	0.5	0.053

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Volatile Organic Analysis
(EPA Method 8260)

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-10TB

Sample Description: GREGORY CANYON, GREGORY CANYON, TRIP BLANK, 06/21/2001

Constituents	Analysis Results	Reporting Units	Method P.Q.L.	Method Detection Level	
Styrene	None Detected	µg/L	0.5	0.047	
1,1,1,2-Tetrachloroethane	None Detected	µg/L	0.5	0.094	
1,1,2,2-Tetrachloroethane	None Detected	µg/L	0.5	0.158	
Tetrachloroethene	None Detected	µg/L	0.5	0.062	
Toluene	None Detected	µg/L	0.5	0.047	
1,2,3-Trichlorobenzene	None Detected	µg/L	0.5	0.044	
1,2,4-Trichlorobenzene	None Detected	µg/L	0.5	0.088	
1,1,1-Trichloroethane	None Detected	µg/L	0.5	0.204	
1,1,2-Trichloroethane	None Detected	µg/L	0.5	0.120	
Trichloroethene	None Detected	µg/L	0.5	0.032	
Trichlorofluoromethane	None Detected	µg/L	0.5	0.044	
1,2,3-Trichloropropane	None Detected	µg/L	1.	0.528	
1,1,2-Trichloro-1,2,2-trifluoroethane	None Detected	µg/L	0.5	0.078	
1,2,4-Trimethylbenzene	None Detected	µg/L	0.5	0.078	
1,3,5-Trimethylbenzene	None Detected	µg/L	0.5	0.066	
Vinyl Chloride	None Detected	µg/L	0.5	0.040	
Total Xylenes	None Detected	µg/L	1.	0.236	
Acetone	None Detected	µg/L	20.	5.935	
Acetonitrile	None Detected	µg/L	20.	5.247	
Acrolein	None Detected	µg/L	50.	5.353	
Acrylonitrile	None Detected	µg/L	20.	1.965	
Allyl Chloride	None Detected	µg/L	5.	0.202	*03
t-Amyl methyl ether	None Detected	µg/L	1.	0.123	
t-Butyl alcohol	None Detected	µg/L	50.	4.259	
Carbon Disulfide	None Detected	µg/L	2.	0.266	*03
Chloroprene	None Detected	µg/L	5.	0.204	*03
trans-1,4-Dichloro-2-butene	None Detected	µg/L	5.	0.419	
Diisopropyl ether	None Detected	µg/L	1.	0.081	
1,4-Dioxane	None Detected	µg/L	300.	59.296	
2-Hexanone	None Detected	µg/L	20.	1.993	
Iodomethane	None Detected	µg/L	2.	0.24	*03
Isobutyl alcohol	None Detected	µg/L	50.	31.72	
Methacrylonitrile	None Detected	µg/L	10.	1.036	
Methyl Ethyl Ketone	None Detected	µg/L	20.	1.752	
4-Methyl-2-pentanone	None Detected	µg/L	20.	0.4	
Methyl-t-butylether	None Detected	µg/L	0.5	0.094	
Propionitrile	None Detected	µg/L	20.	7.783	

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BC Laboratories, Inc.

Volatile Organic Analysis
(EPA Method 8260)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/10/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-10TB

Sample Description: GREGORY CANYON, GREGORY CANYON, TRIP BLANK, 06/21/2001

Quality Control Data

Surrogates	% Recovery	Control Limits
1,2-Dichloroethane-d4	98.	76-114
Toluene-d8	99.	88-110
4-Bromofluorobenzene	105.	86-115

Flag Explanations:
*03 = CCV recovery not within method limits.
California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: Sewer Effluent

Date Collected: 06/21/2001 @ 13:20
Date Extracted: 06/29/2001
Date Analyzed: 07/05/2001
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.24	
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.9	
Anthracene	None Detected	µg/L	2.	0.23	
Benzidine	None Detected	µg/L	20.	0.17	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.67	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.67	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.22	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	0.38	µg/L	5.	0.33	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.76	
4,4-DDT'	None Detected	µg/L	2.	0.23	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.30	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.36	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-1, 06/21/2001 @ 13:20

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.1
Endosulfan II	None Detected	µg/L	10.	0.79
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.55
Fluoranthene	None Detected	µg/L	2.	0.26
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.28
Hexachlorobutadiene	None Detected	µg/L	2.	0.36
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.25
2-Naphthylamine	None Detected	µg/L	20.	0.067
2-Nitroaniline	None Detected	µg/L	2.	0.74
3-Nitroaniline	None Detected	µg/L	2.	1.5
4-Nitroaniline	None Detected	µg/L	5.	1.2
Nitrobenzene	None Detected	µg/L	2.	0.24
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24
2-Chlorophenol	None Detected	µg/L	2.	0.17
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.68
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.42
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-1, 06/21/2001 @ 13:20

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24
Acetophenone	None Detected	µg/L	10.	0.13
2-Acetylaminofluorene	None Detected	µg/L	10.	0.47
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.068
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26
Diphenylamine	None Detected	µg/L	10.	0.082
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18
Kepone	None Detected	µg/L	20.	2.5
Methapyrilene	None Detected	µg/L	10.	0.88
3-Methylcholanthrene	None Detected	µg/L	10.	0.15
Methyl methanesulfonate	None Detected	µg/L	10.	0.13
1,4-Napthoquinone	None Detected	µg/L	20.	0.48
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.063
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17
Phenacetin	None Detected	µg/L	10.	0.13
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25
o-Toluidine	None Detected	µg/L	10.	0.073
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.060

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	78.	21-100
Phenol-d5	59.	10-94
Nitrobenzene-d5	105.	35-114
2-Fluorobiphenyl	97.	43-116
2,4,6-Tribromophenol	121.	10-123

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
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DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-1

Sample Description: GREGORY CANYON, GREGORY CANYON, SW-1, 06/21/2001 @ 13:20

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	96.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample holding time was exceeded.

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Steven Bennett for
Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:00
Date Extracted: 06/29/2001
Date Analyzed: 07/05/2001
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.24	
Acenaphthylene	None Detected	µg/L	2.	0.37	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.9	
Anthracene	None Detected	µg/L	2.	0.23	
Benzidine	None Detected	µg/L	20.	0.17	
Benzo (a) anthracene	None Detected	µg/L	2.	0.28	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.68	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.66	
Benzo (a) pyrene	None Detected	µg/L	2.	0.36	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	2.6	µg/L	10.	0.86	*02
Benzyl alcohol	None Detected	µg/L	2.	0.68	
Butyl Benzyl phthalate	0.44	µg/L	2.	0.25	*02
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.24	
delta-BHC	None Detected	µg/L	2.	0.27	
gamma-BHC	None Detected	µg/L	2.	0.22	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.25	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.58	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.23	
bis(2-ethylhexyl)phthalate	1.1	µg/L	5.	0.34	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.30	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.29	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.32	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.78	
4,4-DDT'	None Detected	µg/L	2.	0.23	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.31	
Dibenzofuran	None Detected	µg/L	2.	0.30	
Di-n-butyl phthalate	0.36	µg/L	2.	0.25	*02
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.25	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.25	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.29	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.37	
Dieldrin	None Detected	µg/L	3.	0.44	
Diethyl phthalate	None Detected	µg/L	2.	0.30	
Dimethyl phthalate	None Detected	µg/L	2.	0.26	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-4, 06/21/2001 @ 09:00

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.29	
Di-n-octylphthalate	None Detected	µg/L	2.	0.21	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.39	
Endosulfan I	None Detected	µg/L	10.	1.1	
Endosulfan II	None Detected	µg/L	10.	0.81	
Endosulfan sulfate	None Detected	µg/L	3.	0.34	
Endrin	None Detected	µg/L	2.	1.9	
Endrin aldehyde	None Detected	µg/L	10.	0.56	
Fluoranthene	None Detected	µg/L	2.	0.26	
Fluorene	None Detected	µg/L	2.	0.29	
Heptachlor	None Detected	µg/L	2.	0.29	
Heptachlor epoxide	None Detected	µg/L	2.	0.26	
Hexachlorobenzene	None Detected	µg/L	2.	0.28	
Hexachlorobutadiene	None Detected	µg/L	2.	0.36	
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.28	
Hexachloroethane	None Detected	µg/L	2.	0.20	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.24	
Isophorone	None Detected	µg/L	2.	0.28	
2-Methylnaphthalene	None Detected	µg/L	2.	0.32	
Naphthalene	0.29	µg/L	2.	0.25	*02
2-Naphthylamine	None Detected	µg/L	20.	0.069	
2-Nitroaniline	None Detected	µg/L	2.	0.76	
3-Nitroaniline	None Detected	µg/L	2.	1.5	
4-Nitroaniline	None Detected	µg/L	5.	1.2	
Nitrobenzene	None Detected	µg/L	2.	0.24	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.35	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	2.0	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.21	
Phenanthrene	None Detected	µg/L	2.	0.24	
Pyrene	None Detected	µg/L	2.	0.23	
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.37	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24	
2-Chlorophenol	None Detected	µg/L	2.	0.17	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.29	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.70	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.5	
2-Methylphenol	None Detected	µg/L	2.	0.21	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.43	
2-Nitrophenol	None Detected	µg/L	2.	0.27	
4-Nitrophenol	None Detected	µg/L	2.	0.47	
Pentachlorophenol	None Detected	µg/L	10.	0.55	
Phenol	None Detected	µg/L	2.	0.19	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-4, 06/21/2001 @ 09:00

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.25
Acetophenone	None Detected	µg/L	10.	0.13
2-Acetylaminofluorene	None Detected	µg/L	10.	0.48
4-Aminobiphenyl	None Detected	µg/L	20.	0.17
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.070
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26
Diphenylamine	None Detected	µg/L	10.	0.084
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18
Kepone	None Detected	µg/L	20.	2.6
Methapyrilene	None Detected	µg/L	10.	0.90
3-Methylcholanthrene	None Detected	µg/L	10.	0.16
Methyl methanesulfonate	None Detected	µg/L	10.	0.14
1,4-Napthoquinone	None Detected	µg/L	20.	0.49
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.064
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.20
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.27
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.17
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.18
Phenacetin	None Detected	µg/L	10.	0.14
1,4-Phenylenediamine	None Detected	µg/L	20.	0.50
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25
o-Toluidine	None Detected	µg/L	10.	0.075
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.19
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.061

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	78.	21-100
Phenol-d5	68.	10-94
Nitrobenzene-d5	102.	35-114
2-Fluorobiphenyl	92.	43-116
2,4,6-Tribromophenol	121.	10-123

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-4

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-4, 06/21/2001 @ 09:00

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	94.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample holding time was exceeded.

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Steven Bennett for
Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 10:50
Date Extracted: 06/29/2001
Date Analyzed: 07/05/2001
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.24	
Acenaphthylene	None Detected	µg/L	2.	0.38	
Aldrin	None Detected	µg/L	2.	0.28	
Aniline	None Detected	µg/L	5.	1.9	
Anthracene	None Detected	µg/L	2.	0.23	
Benzidine	None Detected	µg/L	20.	0.17	
Benzo (a) anthracene	None Detected	µg/L	2.	0.28	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.69	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.66	
Benzo (a) pyrene	None Detected	µg/L	2.	0.36	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.26	
Benzoic Acid	None Detected	µg/L	10.	0.87	
Benzyl alcohol	None Detected	µg/L	2.	0.69	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.25	
alpha-BHC	None Detected	µg/L	2.	0.25	
beta-BHC	None Detected	µg/L	2.	0.24	
delta-BHC	None Detected	µg/L	2.	0.27	
gamma-BHC	None Detected	µg/L	2.	0.22	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.25	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.58	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.23	
bis(2-ethylhexyl)phthalate	0.59	µg/L	5.	0.34	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.30	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.29	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.32	
Chrysene	None Detected	µg/L	2.	0.21	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.79	
4,4-DDT'	None Detected	µg/L	2.	0.23	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.31	
Dibenzofuran	None Detected	µg/L	2.	0.31	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.26	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.25	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.25	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.29	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.37	
Dieldrin	None Detected	µg/L	3.	0.45	
Diethyl phthalate	None Detected	µg/L	2.	0.30	
Dimethyl phthalate	None Detected	µg/L	2.	0.26	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-10, 06/21/2001 @ 10:50

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.26
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.29
Di-n-octylphthalate	None Detected	µg/L	2.	0.21
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.40
Endosulfan I	None Detected	µg/L	10.	1.1
Endosulfan II	None Detected	µg/L	10.	0.82
Endosulfan sulfate	None Detected	µg/L	3.	0.34
Endrin	None Detected	µg/L	2.	2.0
Endrin aldehyde	None Detected	µg/L	10.	0.56
Fluoranthene	None Detected	µg/L	2.	0.27
Fluorene	None Detected	µg/L	2.	0.29
Heptachlor	None Detected	µg/L	2.	0.29
Heptachlor epoxide	None Detected	µg/L	2.	0.26
Hexachlorobenzene	None Detected	µg/L	2.	0.29
Hexachlorobutadiene	None Detected	µg/L	2.	0.37
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.28
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.24
Isophorone	None Detected	µg/L	2.	0.28
2-Methylnaphthalene	None Detected	µg/L	2.	0.32
Naphthalene	None Detected	µg/L	2.	0.25
2-Naphthylamine	None Detected	µg/L	20.	0.069
2-Nitroaniline	None Detected	µg/L	2.	0.76
3-Nitroaniline	None Detected	µg/L	2.	1.5
4-Nitroaniline	None Detected	µg/L	5.	1.2
Nitrobenzene	None Detected	µg/L	2.	0.24
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.35
n-Nitrosodiphenylamine	None Detected	µg/L	2.	2.0
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.21
Phenanthrene	None Detected	µg/L	2.	0.25
Pyrene	None Detected	µg/L	2.	0.24
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.37
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24
2-Chlorophenol	None Detected	µg/L	2.	0.17
2,4-Dichlorophenol	None Detected	µg/L	2.	0.29
2,4-Dimethylphenol	None Detected	µg/L	2.	0.70
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.5
2-Methylphenol	None Detected	µg/L	2.	0.21
3- & 4-Methylphenol	None Detected	µg/L	2.	0.43
2-Nitrophenol	None Detected	µg/L	2.	0.27
4-Nitrophenol	None Detected	µg/L	2.	0.48
Pentachlorophenol	None Detected	µg/L	10.	0.56
Phenol	None Detected	µg/L	2.	0.20

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-10, 06/21/2001 @ 10:50

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.25
Acetophenone	None Detected	µg/L	10.	0.13
2-Acetylaminofluorene	None Detected	µg/L	10.	0.48
4-Aminobiphenyl	None Detected	µg/L	20.	0.18
2,6-Dichlorophenol	None Detected	µg/L	10.	0.18
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.070
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26
Diphenylamine	None Detected	µg/L	10.	0.085
Ethyl methacrylate	None Detected	µg/L	10.	0.057
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18
Kepone	None Detected	µg/L	20.	2.6
Methapyrilene	None Detected	µg/L	10.	0.91
3-Methylcholanthrene	None Detected	µg/L	10.	0.16
Methyl methanesulfonate	None Detected	µg/L	10.	0.14
1,4-Napthoquinone	None Detected	µg/L	20.	0.50
1-Napthylamine	None Detected	µg/L	20.	0.19
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.065
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.20
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.27
n-Nitrosopiperidine	None Detected	µg/L	10.	0.19
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.17
Pentachlorobenzene	None Detected	µg/L	10.	0.13
Pentachloronitrobenzene	None Detected	µg/L	10.	0.18
Phenacetin	None Detected	µg/L	10.	0.14
1,4-Phenylenediamine	None Detected	µg/L	20.	0.51
Pronamide	None Detected	µg/L	10.	0.14
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.21
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25
o-Toluidine	None Detected	µg/L	10.	0.075
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.19
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.062

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	78.	21-100
Phenol-d5	65.	10-94
Nitrobenzene-d5	104.	35-114
2-Fluorobiphenyl	96.	43-116
2,4,6-Tribromophenol	121.	10-123

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-5

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-10, 06/21/2001 @ 10:50

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	97.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample holding time was exceeded.

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Steven Bennett for
Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:30
Date Extracted: 06/29/2001
Date Analyzed: 07/06/2001
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.23	
Acenaphthylene	None Detected	µg/L	2.	0.36	
Aldrin	None Detected	µg/L	2.	0.27	
Aniline	None Detected	µg/L	5.	1.8	
Anthracene	None Detected	µg/L	2.	0.22	
Benzidine	None Detected	µg/L	20.	0.16	
Benzo (a) anthracene	None Detected	µg/L	2.	0.27	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.66	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.64	
Benzo (a) pyrene	None Detected	µg/L	2.	0.35	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.25	
Benzoic Acid	None Detected	µg/L	10.	0.84	
Benzyl alcohol	None Detected	µg/L	2.	0.66	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.24	
alpha-BHC	None Detected	µg/L	2.	0.24	
beta-BHC	None Detected	µg/L	2.	0.23	
delta-BHC	None Detected	µg/L	2.	0.26	
gamma-BHC	None Detected	µg/L	2.	0.21	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.24	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.56	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.22	
bis(2-ethylhexyl)phthalate	1.2	µg/L	5.	0.33	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.29	
4-Chloroaniline	None Detected	µg/L	2.	1.8	
2-Chloronaphthalene	None Detected	µg/L	2.	0.28	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.31	
Chrysene	None Detected	µg/L	2.	0.20	
4,4-DDD'	None Detected	µg/L	2.	0.22	
4,4-DDE'	None Detected	µg/L	3.	0.75	
4,4-DDT'	None Detected	µg/L	2.	0.22	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.30	
Dibenzofuran	None Detected	µg/L	2.	0.29	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.25	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.24	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.28	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.35	
Dieldrin	None Detected	µg/L	3.	0.43	
Diethyl phthalate	None Detected	µg/L	2.	0.29	
Dimethyl phthalate	None Detected	µg/L	2.	0.25	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-14, 06/21/2001 @ 09:30

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.25
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.28
Di-n-octylphthalate	None Detected	µg/L	2.	0.20
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.38
Endosulfan I	None Detected	µg/L	10.	1.0
Endosulfan II	None Detected	µg/L	10.	0.78
Endosulfan sulfate	None Detected	µg/L	3.	0.33
Endrin	None Detected	µg/L	2.	1.9
Endrin aldehyde	None Detected	µg/L	10.	0.54
Fluoranthene	None Detected	µg/L	2.	0.25
Fluorene	None Detected	µg/L	2.	0.28
Heptachlor	None Detected	µg/L	2.	0.28
Heptachlor epoxide	None Detected	µg/L	2.	0.25
Hexachlorobenzene	None Detected	µg/L	2.	0.27
Hexachlorobutadiene	None Detected	µg/L	2.	0.35
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.27
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.23
Isophorone	None Detected	µg/L	2.	0.27
2-Methylnaphthalene	None Detected	µg/L	2.	0.31
Naphthalene	None Detected	µg/L	2.	0.24
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.73
3-Nitroaniline	None Detected	µg/L	2.	1.4
4-Nitroaniline	None Detected	µg/L	5.	1.1
Nitrobenzene	None Detected	µg/L	2.	0.23
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.34
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.9
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.20
Phenanthrene	None Detected	µg/L	2.	0.24
Pyrene	None Detected	µg/L	2.	0.23
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.36
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.23
2-Chlorophenol	None Detected	µg/L	2.	0.16
2,4-Dichlorophenol	None Detected	µg/L	2.	0.28
2,4-Dimethylphenol	None Detected	µg/L	2.	0.67
2,4-Dinitrophenol	None Detected	µg/L	10.	0.28
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.4
2-Methylphenol	None Detected	µg/L	2.	0.20
3- & 4-Methylphenol	None Detected	µg/L	2.	0.41
2-Nitrophenol	None Detected	µg/L	2.	0.26
4-Nitrophenol	None Detected	µg/L	2.	0.46
Pentachlorophenol	None Detected	µg/L	10.	0.54
Phenol	None Detected	µg/L	2.	0.19

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-14, 06/21/2001 @ 09:30

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.26	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.24	
Acetophenone	None Detected	µg/L	10.	0.12	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.46	
4-Aminobiphenyl	None Detected	µg/L	20.	0.17	
2,6-Dichlorophenol	None Detected	µg/L	10.	0.17	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.067	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.25	
Diphenylamine	None Detected	µg/L	10.	0.081	
Ethyl methacrylate	None Detected	µg/L	10.	0.057	
Ethyl methanesulfonate	None Detected	µg/L	10.	0.17	
Kepone	None Detected	µg/L	20.	2.5	
Methapyrilene	None Detected	µg/L	10.	0.87	*03
3-Methylcholanthrene	None Detected	µg/L	10.	0.15	
Methyl methanesulfonate	None Detected	µg/L	10.	0.13	
1,4-Napthoquinone	None Detected	µg/L	20.	0.48	
1-Napthylamine	None Detected	µg/L	20.	0.19	
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062	
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.19	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.26	
n-Nitrosopiperidine	None Detected	µg/L	10.	0.18	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.16	
Pentachlorobenzene	None Detected	µg/L	10.	0.13	
Pentachloronitrobenzene	None Detected	µg/L	10.	0.17	
Phenacetin	None Detected	µg/L	10.	0.13	
1,4-Phenylenediamine	None Detected	µg/L	20.	0.49	
Pronamide	None Detected	µg/L	10.	0.14	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.20	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.24	
o-Toluidine	None Detected	µg/L	10.	0.072	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.18	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	73.	21-100
Phenol-d5	60.	10-94
Nitrobenzene-d5	102.	35-114
2-Fluorobiphenyl	96.	43-116
2,4,6-Tribromophenol	116.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-6

Sample Description: GREGORY CANYON, GREGORY CANYON, GLA-14, 06/21/2001 @ 09:30

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	99.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample holding time was exceeded.

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Steven Bennett for
Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Project Number: GREGORY CANYON
Sampling Location: GREGORY CANYON
Sample ID: MWD#34
Sample Matrix: Groundwater

Date Collected: 06/21/2001 @ 09:55
Date Extracted: 06/29/2001
Date Analyzed: 07/06/2001
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.24
Acenaphthylene	None Detected	µg/L	2.	0.38
Aldrin	None Detected	µg/L	2.	0.28
Aniline	None Detected	µg/L	5.	1.9
Anthracene	None Detected	µg/L	2.	0.23
Benzidine	None Detected	µg/L	20.	0.17
Benzo (a) anthracene	None Detected	µg/L	2.	0.28
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.69
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.66
Benzo (a) pyrene	None Detected	µg/L	2.	0.36
Benzo (ghi) perylene	None Detected	µg/L	2.	0.26
Benzoic Acid	None Detected	µg/L	10.	0.87
Benzyl alcohol	None Detected	µg/L	2.	0.69
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.25
alpha-BHC	None Detected	µg/L	2.	0.25
beta-BHC	None Detected	µg/L	2.	0.24
delta-BHC	None Detected	µg/L	2.	0.27
gamma-BHC	None Detected	µg/L	2.	0.22
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.25
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.58
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.23
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.34
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.30
4-Chloroaniline	None Detected	µg/L	2.	1.8
2-Chloronaphthalene	None Detected	µg/L	2.	0.29
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.32
Chrysene	None Detected	µg/L	2.	0.21
4,4-DDD'	None Detected	µg/L	2.	0.22
4,4-DDE'	None Detected	µg/L	3.	0.79
4,4-DDT'	None Detected	µg/L	2.	0.23
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.31
Dibenzofuran	None Detected	µg/L	2.	0.31
Di-n-butyl phthalate	None Detected	µg/L	2.	0.26
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.25
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.25
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.29
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.37
Dieldrin	None Detected	µg/L	3.	0.45
Diethyl phthalate	None Detected	µg/L	2.	0.30
Dimethyl phthalate	None Detected	µg/L	2.	0.26

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Sample Description: GREGORY CANYON, GREGORY CANYON, MWD#34, 06/21/2001 @ 09:55

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.26
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.29
Di-n-octylphthalate	None Detected	µg/L	2.	0.21
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.40
Endosulfan I	None Detected	µg/L	10.	1.1
Endosulfan II	None Detected	µg/L	10.	0.82
Endosulfan sulfate	None Detected	µg/L	3.	0.34
Endrin	None Detected	µg/L	2.	2.0
Endrin aldehyde	None Detected	µg/L	10.	0.56
Fluoranthene	None Detected	µg/L	2.	0.27
Fluorene	None Detected	µg/L	2.	0.29
Heptachlor	None Detected	µg/L	2.	0.29
Heptachlor epoxide	None Detected	µg/L	2.	0.26
Hexachlorobenzene	None Detected	µg/L	2.	0.29
Hexachlorobutadiene	None Detected	µg/L	2.	0.37
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.28
Hexachloroethane	None Detected	µg/L	2.	0.20
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.24
Isophorone	None Detected	µg/L	2.	0.28
2-Methylnaphthalene	None Detected	µg/L	2.	0.32
Naphthalene	None Detected	µg/L	2.	0.25
2-Naphthylamine	None Detected	µg/L	20.	0.069
2-Nitroaniline	None Detected	µg/L	2.	0.76
3-Nitroaniline	None Detected	µg/L	2.	1.5
4-Nitroaniline	None Detected	µg/L	5.	1.2
Nitrobenzene	None Detected	µg/L	2.	0.24
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.35
n-Nitrosodiphenylamine	None Detected	µg/L	2.	2.0
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.21
Phenanthrene	None Detected	µg/L	2.	0.25
Pyrene	None Detected	µg/L	2.	0.24
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.37
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.24
2-Chlorophenol	None Detected	µg/L	2.	0.17
2,4-Dichlorophenol	None Detected	µg/L	2.	0.29
2,4-Dimethylphenol	None Detected	µg/L	2.	0.70
2,4-Dinitrophenol	None Detected	µg/L	10.	0.29
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.5
2-Methylphenol	None Detected	µg/L	2.	0.21
3- & 4-Methylphenol	None Detected	µg/L	2.	0.43
2-Nitrophenol	None Detected	µg/L	2.	0.27
4-Nitrophenol	None Detected	µg/L	2.	0.48
Pentachlorophenol	None Detected	µg/L	10.	0.56
Phenol	None Detected	µg/L	2.	0.20

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Sample Description: GREGORY CANYON, GREGORY CANYON, MWD#34, 06/21/2001 @ 09:55

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.27	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.25	
Acetophenone	None Detected	µg/L	10.	0.13	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.48	
4-Aminobiphenyl	None Detected	µg/L	20.	0.18	
2,6-Dichlorophenol	None Detected	µg/L	10.	0.18	
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.070	
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.11	
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.26	
Diphenylamine	None Detected	µg/L	10.	0.085	
Ethyl methacrylate	None Detected	µg/L	10.	0.057	
Ethyl methanesulfonate	None Detected	µg/L	10.	0.18	
Kepone	None Detected	µg/L	20.	2.6	
Methapyrilene	None Detected	µg/L	10.	0.91	*03
3-Methylcholanthrene	None Detected	µg/L	10.	0.16	
Methyl methanesulfonate	None Detected	µg/L	10.	0.14	
1,4-Napthoquinone	None Detected	µg/L	20.	0.50	
1-Napthylamine	None Detected	µg/L	20.	0.19	
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.065	
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.20	
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.27	
n-Nitrosopiperidine	None Detected	µg/L	10.	0.19	
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.17	
Pentachlorobenzene	None Detected	µg/L	10.	0.13	
Pentachloronitrobenzene	None Detected	µg/L	10.	0.18	
Phenacetin	None Detected	µg/L	10.	0.14	
1,4-Phenylenediamine	None Detected	µg/L	20.	0.51	
Pronamide	None Detected	µg/L	10.	0.14	
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.21	
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.25	
o-Toluidine	None Detected	µg/L	10.	0.075	
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.19	
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.062	

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	54.	21-100
Phenol-d5	45.	10-94
Nitrobenzene-d5	106.	35-114
2-Fluorobiphenyl	98.	43-116
2,4,6-Tribromophenol	99.	10-123

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
Attn: RANDY BAUER 909-860-7777

Date Reported: 07/12/2001
Date Received: 06/22/2001
Laboratory No.: 01-07151-7

Sample Description: GREGORY CANYON, GREGORY CANYON, MWD#34, 06/21/2001 @ 09:55

Quality Control Data

Surrogates	% Recovery	Control Limits
d14-Terphenyl	102.	33-141

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Note: Sample holding time was exceeded.

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Steven Bennett for
Stuart G. Buttram
Department Supervisor

cc: GEOLOGIC - BILL LOPEZ

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*WATER

Samples Affected: 01-07151-1, 01-07151-2

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Magnesium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Sodium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Sulfate	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
Chloride	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
Nitrate as N	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
pH	n.a.	06/25/2001	PDL	EPA-9040	06/25/2001	PDL
Total Dissolved Solids @ 180 C	n.a.	06/26/2001	ELN	EPA-160.1	06/26/2001	ELN
Total Cyanide	EPA-335.3	06/26/2001	MET	EPA-9012	06/27/2001	TDC
Total Sulfide	n.a.	06/26/2001	JWH2	EPA-376.2	06/26/2001	JWH2

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*WATER

Samples Affected: 01-07151-1, 01-07151-2

Constituents	Method Blank Readings	Units
Calcium	< 0.05	mg/L
Magnesium	< 0.05	mg/L
Sodium	< 0.5	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*WATER

Samples Affected: 01-07151-1, 01-07151-2

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	DISS-7151-1	93.9	93.92	103.8	101.3	10.2	10.2	mg/L	0.	2.	20	H MEAN	H MEAN	85 - 115
Magnesium	DISS-7151-1	34.61	34.54	44.93	43.9	10.2	10.2	mg/L	0.	2.	20	101.	91.	85 - 115
Sodium	DISS-7151-1	72.8	73.23	82.35	80.87	10.2	10.2	mg/L	1.	2.	20	H MEAN	H MEAN	85 - 115
Sulfate	7151-1-	204.0	204.1	304.5	304.6	100.0	100.0	mg/L	0.	0.	10	101.	101.	80 - 120
Chloride	7151-1-	112.9	112.8	209.2	208.0	100.0	100.0	mg/L	0.	1.	10	96.	95.	80 - 120
Nitrate as N	7151-1-	0.05890	0.06160	5.020	5.022	5.000	5.000	mg/L	<PQL	0.	10	99.	99.	80 - 120
pH	7145-1	7.64	7.67					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	7151-1	703.3	686.7					mg/L	2.		10			
Total Cyanide	W-TOTAL-07179-	< 0.02	< 0.02	0.2006	0.1977	0.2500	0.2500	mg/L	<PQL	1.	10	80.	79.	90 - 110
Total Sulfide	7151-2	< 0.1	< 0.1	0.6064	0.5575	0.5556	0.5556	mg/L	<PQL	8.	10	108.	100.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.
The matrix spike recoveries for Total Cyanide are outside QC limits.

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*WATER

Samples Affected: 01-07151-1, 01-07151-2

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Calcium	LFB-2	9.8580	10.	mg/L	99.	85 - 115
Magnesium	LFB-2	10.11	10.	mg/L	101.	85 - 115
Sodium	LFB-2	10.27	10.	mg/L	103.	85 - 115
Sulfate	LCSW-6-22A	97.567	100.	mg/L	98.	90 - 110
Chloride	LCSW-6-22A	102.85	100.	mg/L	103.	90 - 110
Nitrate as N	LCSW-6-22A	4.9537	5.00	mg/L	99.	90 - 110
pH	LCSW1	6.98	7.0	pH Units	100.	98 - 102
Total Dissolved Solids @ 180 C	LCSW1	600.00	586.	mg/L	102.	90 - 110
Total Cyanide	W-TOTAL-LC	9.8773	10.0	mg/L	99.	90 - 110
Total Sulfide	LCSW1	0.51204	0.500	mg/L	102.	

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-3*WATER

Samples Affected: 01-07151-3 - 01-07151-6

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Magnesium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Sodium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Sulfate	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
Chloride	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
Nitrate as N	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
pH	n.a.	06/25/2001	PDL	EPA-9040	06/25/2001	PDL
Total Dissolved Solids @ 180 C	n.a.	06/26/2001	ELN	EPA-160.1	06/26/2001	ELN
Total Cyanide	EPA-335.3	06/27/2001	MET	EPA-9012	06/28/2001	TDC
Total Sulfide	n.a.	06/26/2001	JWH2	EPA-376.2	06/26/2001	JWH2

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-3*WATER

Samples Affected: 01-07151-3 - 01-07151-6

Constituents	Method Blank Readings	Units
Calcium	< 0.05	mg/L
Magnesium	< 0.05	mg/L
Sodium	< 0.5	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

Danette Bohm

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B C LABORATORIES
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(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-3*WATER

Samples Affected: 01-07151-3 - 01-07151-6

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	DISS-7151-1	93.9	93.92	103.8	101.3	10.2	10.2	mg/L	0.	2.	20	H MEAN	H MEAN	85 - 115
Magnesium	DISS-7151-1	34.61	34.54	44.93	43.9	10.2	10.2	mg/L	0.	2.	20	101.	91.	85 - 115
Sodium	DISS-7151-1	72.8	73.23	82.35	80.87	10.2	10.2	mg/L	1.	2.	20	H MEAN	H MEAN	85 - 115
Sulfate	7151-1-	204.0	204.1	304.5	304.6	100.0	100.0	mg/L	0.	0.	10	101.	101.	80 - 120
Chloride	7151-1-	112.9	112.8	209.2	208.0	100.0	100.0	mg/L	0.	1.	10	96.	95.	80 - 120
Nitrate as N	7151-1-	0.05890	0.06160	5.020	5.022	5.000	5.000	mg/L	<PQL	0.	10	99.	99.	80 - 120
pH	7145-1	7.64	7.67					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	7151-1	703.3	686.7					mg/L	2.		10			
Total Cyanide	W-TOTAL-07189-	< 0.02	< 0.02	0.2414	0.2414	0.2500	0.2500	mg/L	<PQL	0.	10	97.	97.	90 - 110
Total Sulfide	7151-2	< 0.1	< 0.1	0.6064	0.5575	0.5556	0.5556	mg/L	<PQL	8.	10	108.	100.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-3*WATER

Samples Affected: 01-07151-3 - 01-07151-6

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Calcium	LFB-2	9.8580	10.	mg/L	99.	85 - 115
Magnesium	LFB-2	10.11	10.	mg/L	101.	85 - 115
Sodium	LFB-2	10.27	10.	mg/L	103.	85 - 115
Sulfate	LCSW-6-22A	97.567	100.	mg/L	98.	90 - 110
Chloride	LCSW-6-22A	102.85	100.	mg/L	103.	90 - 110
Nitrate as N	LCSW-6-22A	4.9537	5.00	mg/L	99.	90 - 110
pH	LCSW1	6.98	7.0	pH Units	100.	98 - 102
Total Dissolved Solids @ 180 C	LCSW1	600.00	586.	mg/L	102.	90 - 110
Total Cyanide	W-TOTAL-LC	9.9554	10.0	mg/L	100.	90 - 110
Total Sulfide	LCSW1	0.51204	0.500	mg/L	102.	90 - 110

Quality Control Officer

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-7*WATER

Samples Affected: 01-07151-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Calcium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Magnesium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Sodium	EPA-600-4-79-02	06/21/2001	ARD	EPA-6010	06/26/2001	ARD
Sulfate	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
Chloride	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
Nitrate as N	n.a.	06/23/2001	DPC	EPA-300.0	06/23/2001	DPC
pH	n.a.	06/25/2001	PDL	EPA-9040	06/25/2001	PDL
Total Dissolved Solids @ 180 C	n.a.	06/26/2001	ELN	EPA-160.1	06/26/2001	ELN
Total Cyanide	EPA-335.3	06/27/2001	MET	EPA-9012	06/28/2001	TDC
Total Sulfide	n.a.	06/26/2001	JWH2	EPA-376.2	06/26/2001	JWH2

Quality Control Officer

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-7*WATER

Samples Affected: 01-07151-7

Constituents	Method Blank Readings	Units
Calcium	< 0.05	mg/L
Magnesium	< 0.05	mg/L
Sodium	< 0.5	mg/L
Sulfate	< 1.0	mg/L
Chloride	< 0.5	mg/L
Nitrate as N	< 0.1	mg/L
Total Dissolved Solids @ 180 C	<10.	mg/L
Total Cyanide	< 0.02	mg/L
Total Sulfide	< 0.1	mg/L

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-7*WATER

Samples Affected: 01-07151-7

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Calcium	DISS-7151-1	93.9	93.92	103.8	101.3	10.2	10.2	mg/L	0.	2.	20	H MEAN	H MEAN	85 - 115
Magnesium	DISS-7151-1	34.61	34.54	44.93	43.9	10.2	10.2	mg/L	0.	2.	20	101.	91.	85 - 115
Sodium	DISS-7151-1	72.8	73.23	82.35	80.87	10.2	10.2	mg/L	1.	2.	20	H MEAN	H MEAN	85 - 115
Sulfate	7151-1-	204.0	204.1	304.5	304.6	100.0	100.0	mg/L	0.	0.	10	101.	101.	80 - 120
Chloride	7151-1-	112.9	112.8	209.2	208.0	100.0	100.0	mg/L	0.	1.	10	96.	95.	80 - 120
Nitrate as N	7151-1-	0.05890	0.06160	5.020	5.022	5.000	5.000	mg/L	<PQL	0.	10	99.	99.	80 - 120
pH	7151-7	7.66	7.69					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	7151-1	703.3	686.7					mg/L	2.		10			
Total Cyanide	W-TOTAL-07189-	< 0.02	< 0.02	0.2414	0.2414	0.2500	0.2500	mg/L	<PQL	0.	10	97.	97.	90 - 110
Total Sulfide	7151-2	< 0.1	< 0.1	0.6064	0.5575	0.5556	0.5556	mg/L	<PQL	8.	10	108.	100.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

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QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-7*WATER

Samples Affected: 01-07151-7

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Calcium	LFB-2	9.8580	10.	mg/L	99.	85 - 115
Magnesium	LFB-2	10.11	10.	mg/L	101.	85 - 115
Sodium	LFB-2	10.27	10.	mg/L	103.	85 - 115
Sulfate	LCSW-6-22A	97.567	100.	mg/L	98.	90 - 110
Chloride	LCSW-6-22A	102.85	100.	mg/L	103.	90 - 110
Nitrate as N	LCSW-6-22A	4.9537	5.00	mg/L	99.	90 - 110
pH	LCSW2	7.02	7.0	pH Units	100.	98 - 102
Total Dissolved Solids @ 180 C	LCSW1	600.00	586.	mg/L	102.	90 - 110
Total Cyanide	W-TOTAL-LC	9.9554	10.0	mg/L	100.	90 - 110
Total Sulfide	LCSW1	0.51204	0.500	mg/L	102.	90 - 110

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*METAL

Samples Affected: 01-07151-1 - 01-07151-4

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/27/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7060	07/06/2001	DIW
Dissolved Barium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Copper	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/28/2001	JCC
Dissolved Lead	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7421	07/06/2001	DIW
Dissolved Mercury	EPA-7470	06/27/2001	DMM2	EPA-7470	06/27/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7740	07/06/2001	DIW
Dissolved Silver	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Tin	EPA-600-4-79-02	06/21/2001	FIELD	EPA-282.2	06/27/2001	LMK
Dissolved Thallium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7841	07/02/2001	LMK
Dissolved Vanadium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*METAL

Samples Affected: 01-07151-1 - 01-07151-4

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<10.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 1.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 1.	µg/L
Dissolved Silver	4.9	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	<10.	µg/L

The trace detection for Dissolved Silver is an estimated value between the MDL and PQL.

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*METAL

Samples Affected: 01-07151-1 - 01-07151-4

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	DISS-7151-1-	<100.	<100.	418.0	413.5	408.2	408.2	µg/L	<PQL	1.	20	104.	103.	85 - 115
Dissolved Arsenic	DISS-7151-1	1.486	1.285	28.45	28.80	26.32	26.32	µg/L	<PQL	1.	20	102.	104.	85 - 115
Dissolved Barium	DISS-7151-1	82.50	82.10	279.6	273.2	204.1	204.1	µg/L	0.	2.	20	97.	93.	85 - 115
Dissolved Beryllium	DISS-7151-1	< 10.	< 10.	189.3	184.2	204.1	204.1	µg/L	<PQL	3.	20	93.	90.	85 - 115
Dissolved Cadmium	DISS-7151-1	< 10.	< 10.	209.0	203.0	204.1	204.1	µg/L	<PQL	3.	20	103.	100.	85 - 115
Dissolved Chromium	DISS-7151-1	< 10.	< 10.	197.6	194.9	204.1	204.1	µg/L	<PQL	1.	20	96.	95.	85 - 115
Dissolved Cobalt	DISS-7151-1	< 50.	< 50.	200.5	196.8	204.1	204.1	µg/L	<PQL	2.	20	98.	96.	85 - 115
Dissolved Copper	DISS-7151-1-CU	< 10.	< 10.	213.7	221.7	204.1	204.1	µg/L	<PQL	4.	20	105.	109.	85 - 115
Dissolved Lead	DISS-7151-1	0.6945	0.4235	27.21	27.28	26.32	26.32	µg/L	<PQL	0.	20	101.	101.	85 - 115
Dissolved Mercury	DISS-07151-1	< 0.2	< 0.2	1.081	1.081	1.000	1.000	µg/L	<PQL	0.	20	105.	105.	70 - 130
Dissolved Nickel	DISS-7151-1	< 10.	< 10.	391.1	383.4	408.2	408.2	µg/L	<PQL	2.	20	95.	93.	85 - 115
Dissolved Selenium	DISS-7151-1-X4	< 10.	< 10.	96.73	98.01	105.3	105.3	µg/L	<PQL	1.	20	91.	93.	85 - 115
Dissolved Silver	DISS-7151-1	5.300	2.600	203.9	198.2	204.1	204.1	µg/L	<PQL	3.	20	97.	95.	85 - 115
Dissolved Tin	DISS-7151-1	< 5.	< 5.	47.05	46.00	52.63	52.63	µg/L	<PQL	2.	20	89.	87.	85 - 115
Dissolved Thallium	DISS-7151-1	< 1.	< 1.	22.81	23.34	26.32	26.32	µg/L	<PQL	2.	20	89.	91.	85 - 115
Dissolved Vanadium	DISS-7151-1	11.00	7.900	212.9	209.1	204.1	204.1	µg/L	<PQL	2.	20	99.	97.	85 - 115
Dissolved Zinc	DISS-7151-1	5.000	5.000	217.0	212.6	204.1	204.1	µg/L	<PQL	2.	20	104.	102.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*METAL

Samples Affected: 01-07151-1 - 01-07151-4

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Dissolved Antimony	LFB-1	389.90	400.	µg/L	97.	85 - 115
Dissolved Arsenic	LFB-LCSW	26.384	25.0	µg/L	106.	85 - 115
Dissolved Barium	LFB-2	196.70	200.	µg/L	98.	85 - 115
Dissolved Beryllium	LFB-2	182.70	200.	µg/L	91.	85 - 115
Dissolved Cadmium	LFB-2	202.20	200.	µg/L	101.	85 - 115
Dissolved Chromium	LFB-2	195.70	200.	µg/L	98.	85 - 115
Dissolved Cobalt	LFB-2	201.80	200.	µg/L	101.	85 - 115
Dissolved Copper	LFB-1	202.30	200.	µg/L	101.	85 - 115
Dissolved Lead	LFB-LCSW	25.408	25.0	µg/L	102.	85 - 115
Dissolved Mercury	DISS-LCSW1	0.94989	1.00	µg/L	95.	85 - 115
Dissolved Nickel	LFB-2	394.60	400.	µg/L	99.	85 - 115
Dissolved Selenium	LFB-LCSW	24.045	25.0	µg/L	96.	85 - 115
Dissolved Silver	LFB-2	182.40	200.	µg/L	91.	85 - 115
Dissolved Tin	LFB-50-LCS	47.400	50.0	µg/L	95.	85 - 115
Dissolved Thallium	LFB-25-LCS	25.080	25.0	µg/L	100.	85 - 115
Dissolved Vanadium	LFB-2	202.20	200.	µg/L	101.	85 - 115
Dissolved Zinc	LFB-2	203.60	200.	µg/L	102.	85 - 115

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-5*METAL

Samples Affected: 01-07151-5 - 01-07151-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Dissolved Antimony	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/27/2001	ARD
Dissolved Arsenic	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7060	07/06/2001	DIW
Dissolved Barium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Beryllium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Cadmium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Chromium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Cobalt	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Copper	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/28/2001	JCC
Dissolved Lead	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7421	07/06/2001	DIW
Dissolved Mercury	EPA-7470	06/27/2001	DMM2	EPA-7470	06/27/2001	PAP
Dissolved Nickel	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Selenium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7740	07/06/2001	DIW
Dissolved Silver	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Tin	EPA-600-4-79-02	06/21/2001	FIELD	EPA-282.2	06/27/2001	LMK
Dissolved Thallium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-7841	07/02/2001	LMK
Dissolved Vanadium	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD
Dissolved Zinc	EPA-600-4-79-02	06/21/2001	FIELD	EPA-6010	06/26/2001	ARD

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-5*METAL

Samples Affected: 01-07151-5 - 01-07151-7

Constituents	Method Blank Readings	Units
Dissolved Antimony	<100.	µg/L
Dissolved Arsenic	< 2.	µg/L
Dissolved Barium	<10.	µg/L
Dissolved Beryllium	<10.	µg/L
Dissolved Cadmium	<10.	µg/L
Dissolved Chromium	<10.	µg/L
Dissolved Cobalt	<50.	µg/L
Dissolved Copper	<10.	µg/L
Dissolved Lead	< 1.	µg/L
Dissolved Mercury	< 0.2	µg/L
Dissolved Nickel	<10.	µg/L
Dissolved Selenium	< 1.	µg/L
Dissolved Silver	4.9	µg/L
Dissolved Tin	< 5.	µg/L
Dissolved Thallium	< 1.	µg/L
Dissolved Vanadium	<10.	µg/L
Dissolved Zinc	<10.	µg/L

The trace detection for Dissolved Silver is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-5*METAL

Samples Affected: 01-07151-5 - 01-07151-7

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Antimony	DISS-7151-1-	<100.	<100.	418.0	413.5	408.2	408.2	µg/L	<PQL	1.	20	104.	103.	85 - 115
Dissolved Arsenic	DISS-7151-1	1.486	1.285	28.45	28.80	26.32	26.32	µg/L	<PQL	1.	20	102.	104.	85 - 115
Dissolved Barium	DISS-7151-1	82.50	82.10	279.6	273.2	204.1	204.1	µg/L	0.	2.	20	97.	93.	85 - 115
Dissolved Beryllium	DISS-7151-1	< 10.	< 10.	189.3	184.2	204.1	204.1	µg/L	<PQL	3.	20	93.	90.	85 - 115
Dissolved Cadmium	DISS-7151-1	< 10.	< 10.	209.0	203.0	204.1	204.1	µg/L	<PQL	3.	20	103.	100.	85 - 115
Dissolved Chromium	DISS-7151-1	< 10.	< 10.	197.6	194.9	204.1	204.1	µg/L	<PQL	1.	20	96.	95.	85 - 115
Dissolved Cobalt	DISS-7151-1	< 50.	< 50.	200.5	196.8	204.1	204.1	µg/L	<PQL	2.	20	98.	96.	85 - 115
Dissolved Copper	DISS-7151-7-CU	< 10.	< 10.	173.6	181.6	204.1	204.1	µg/L	<PQL	5.	20	85.	89.	85 - 115
Dissolved Lead	DISS-7151-1	0.6945	0.4235	27.21	27.28	26.32	26.32	µg/L	<PQL	0.	20	101.	101.	85 - 115
Dissolved Mercury	DISS-07151-1	< 0.2	< 0.2	1.081	1.081	1.000	1.000	µg/L	<PQL	0.	20	105.	105.	70 - 130
Dissolved Nickel	DISS-7151-1	< 10.	< 10.	391.1	383.4	408.2	408.2	µg/L	<PQL	2.	20	95.	93.	85 - 115
Dissolved Selenium	DISS-7151-1-X4	< 10.	< 10.	96.73	98.01	105.3	105.3	µg/L	<PQL	1.	20	91.	93.	85 - 115
Dissolved Silver	DISS-7151-1	5.300	2.600	203.9	198.2	204.1	204.1	µg/L	<PQL	3.	20	97.	95.	85 - 115
Dissolved Tin	DISS-7151-1	< 5.	< 5.	47.05	46.00	52.63	52.63	µg/L	<PQL	2.	20	89.	87.	85 - 115
Dissolved Thallium	DISS-7151-1	< 1.	< 1.	22.81	23.34	26.32	26.32	µg/L	<PQL	2.	20	89.	91.	85 - 115
Dissolved Vanadium	DISS-7151-1	11.00	7.900	212.9	209.1	204.1	204.1	µg/L	<PQL	2.	20	99.	97.	85 - 115
Dissolved Zinc	DISS-7151-1	5.000	5.000	217.0	212.6	204.1	204.1	µg/L	<PQL	2.	20	104.	102.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Laboratory Control Sample)

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/16/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-5*METAL

Samples Affected: 01-07151-5 - 01-07151-7

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Dissolved Antimony	LFB-1	389.90	400.	µg/L	97.	85 - 115
Dissolved Arsenic	LFB-LCSW	26.384	25.0	µg/L	106.	85 - 115
Dissolved Barium	LFB-2	196.70	200.	µg/L	98.	85 - 115
Dissolved Beryllium	LFB-2	182.70	200.	µg/L	91.	85 - 115
Dissolved Cadmium	LFB-2	202.20	200.	µg/L	101.	85 - 115
Dissolved Chromium	LFB-2	195.70	200.	µg/L	98.	85 - 115
Dissolved Cobalt	LFB-2	201.80	200.	µg/L	101.	85 - 115
Dissolved Copper	LFB-1	183.00	200.	µg/L	92.	85 - 115
Dissolved Lead	LFB-LCSW	25.408	25.0	µg/L	102.	85 - 115
Dissolved Mercury	DISS-LCSW1	0.94989	1.00	µg/L	95.	85 - 115
Dissolved Nickel	LFB-2	394.60	400.	µg/L	99.	85 - 115
Dissolved Selenium	LFB-LCSW	24.045	25.0	µg/L	96.	85 - 115
Dissolved Silver	LFB-2	182.40	200.	µg/L	91.	85 - 115
Dissolved Tin	LFB-50-LCS	47.400	50.0	µg/L	95.	85 - 115
Dissolved Thallium	LFB-25-LCS	25.080	25.0	µg/L	100.	85 - 115
Dissolved Vanadium	LFB-2	202.20	200.	µg/L	101.	85 - 115
Dissolved Zinc	LFB-2	203.60	200.	µg/L	102.	85 - 115

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8080

Samples Affected: 01-07151-1, 01-07151-3 - 01-07151-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8080 Compounds	EPA-3510	06/24/2001	WAE/MM	EPA-8080	07/18/2001	RKB

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8080

Samples Affected: 01-07151-1, 01-07151-3 - 01-07151-7

Constituents	Method Blank Readings	Units
Aldrin	< 0.005	µg/L
alpha-BHC	< 0.005	µg/L
beta-BHC	< 0.005	µg/L
delta-BHC	< 0.005	µg/L
gamma-BHC	< 0.005	µg/L
Chlordane (Technical)	< 0.1	µg/L
4,4'-DDD	< 0.005	µg/L
4,4'-DDE	< 0.005	µg/L
4,4'-DDT	< 0.005	µg/L
Dieldrin	< 0.005	µg/L
Endosulfan I	< 0.005	µg/L
Endosulfan II	< 0.005	µg/L
Endosulfan Sulfate	< 0.005	µg/L
Endrin	< 0.005	µg/L
Endrin Aldehyde	< 0.01	µg/L
Heptachlor	< 0.005	µg/L
Heptachlor Epoxide	< 0.005	µg/L
Hexachlorocyclopentadiene	< 0.01	µg/L
Methoxychlor	< 0.005	µg/L
Toxaphene	< 2.	µg/L
PCB-1016	< 0.2	µg/L
PCB-1221	< 0.2	µg/L
PCB-1232	< 0.2	µg/L
PCB-1242	< 0.2	µg/L
PCB-1248	< 0.2	µg/L
PCB-1254	< 0.2	µg/L
PCB-1260	< 0.2	µg/L
Total PCB's (Summation)	< 0.2	µg/L

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8080

Samples Affected: 01-07151-1, 01-07151-3 - 01-07151-7

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8080

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8080

Samples Affected: 01-07151-1, 01-07151-3 - 01-07151-7

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Aldrin	MS-06-29-01	< 0.005	0.263	0.269	0.250	0.250	µg/L	2.	24	105.	108.	49 - 126
gamma-BHC	MS-06-29-01	< 0.005	0.268	0.275	0.250	0.250	µg/L	2.	23	107.	110.	52 - 128
4,4'-DDT	MS-06-29-01	< 0.005	0.291	0.271	0.250	0.250	µg/L	7.	28	116.	108.	34 - 146
Dieldrin	MS-06-29-01	< 0.005	0.279	0.274	0.250	0.250	µg/L	2.	26	112.	110.	47 - 133
Endrin	MS-06-29-01	< 0.005	0.297	0.289	0.250	0.250	µg/L	3.	29	119.	116.	36 - 139
Heptachlor	MS-06-29-01	< 0.005	0.243	0.245	0.250	0.250	µg/L	1.	22	97.	98.	48 - 126

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/12/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8150

Samples Affected: 01-07151-1 - 01-07151-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
8150 compounds 1 - 4	3510	06/25/2001	JCM	8150	06/28/2001	KMS
8150 compounds 5 - 7	3510	06/25/2001	JCM	8150	06/29/2001	KMS

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8150

Samples Affected: 01-07151-1 - 01-07151-7

Constituents	Method Blank Readings	Units
2,4-D	< 0.4	µg/L
Dinoseb	< 0.2	µg/L
2,4,5-T	< 0.09	µg/L
2,4,5-TP (Silvex)	< 0.07	µg/L

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8150

Samples Affected: 01-07151-1 - 01-07151-7

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
2,4-D	MS1-06-25-01	< 0.4	1.63	1.81	2.00	2.00	µg/L	11.	30	82.	91.	20 - 142
Dinoseb	MS1-06-25-01	< 0.2	0.68	0.99	1.00	1.00	µg/L	38.	30	68.	99.	13 - 119
2,4,5-T	MS1-06-25-01	< 0.09	0.48	0.61	0.60	0.60	µg/L	24.	30	80.	102.	42 - 121
2,4,5-TP (Silvex)	MS1-06-25-01	< 0.07	0.58	0.68	0.60	0.60	µg/L	16.	30	97.	113.	54 - 132

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

The spike RPD for Dinoseb is outside QC limits.

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8150

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/09/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8150

Samples Affected: 01-07151-1 - 01-07151-7

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
2,4-D	LCS	1.81	2.00	µg/L	90.	20 - 142
Dinoseb	LCS	0.90	1.00	µg/L	90.	13 - 119
2,4,5-T	LCS	0.58	0.60	µg/L	96.	42 - 121
2,4,5-TP (Silvex)	LCS	0.64	0.60	µg/L	107.	54 - 132

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
METHOD 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 Compound #1,3,10TB	EPA-5030	06/28/2001	SLL/SM	EPA-8260	06/28/2001	SLL/SM

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
METHOD 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

Constituents	Method Blank Readings	Units
Benzene	< 0.5	µg/L
Bromobenzene	< 0.5	µg/L
Bromochloromethane	< 0.5	µg/L
Bromodichloromethane	< 0.5	µg/L
Bromoform	< 0.5	µg/L
Bromomethane	< 0.5	µg/L
n-Butylbenzene	< 0.5	µg/L
sec-Butylbenzene	< 0.5	µg/L
tert-Butylbenzene	< 0.5	µg/L
Carbon tetrachloride	< 0.5	µg/L
Chlorobenzene	< 0.5	µg/L
Chloroethane	< 0.5	µg/L
Chloroform	< 0.5	µg/L
Chloromethane	< 0.5	µg/L
2-Chlorotoluene	< 0.5	µg/L
4-Chlorotoluene	< 0.5	µg/L
Dibromochloromethane	< 0.5	µg/L
1,2-Dibromo-3-Chloropropane	< 1.	µg/L
1,2-Dibromoethane	< 0.5	µg/L
Dibromomethane	< 0.5	µg/L
1,2-Dichlorobenzene	< 0.5	µg/L
1,3-Dichlorobenzene	< 0.5	µg/L
1,4-Dichlorobenzene	< 0.5	µg/L
Dichlorodifluoromethane	< 0.5	µg/L
1,1-Dichloroethane	< 0.5	µg/L
1,2-Dichloroethane	< 0.5	µg/L
1,1-Dichloroethene	< 0.5	µg/L
cis-1,2-Dichloroethene	< 0.5	µg/L
trans-1,2-Dichloroethene	< 0.5	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
METHOD 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

Constituents	Method Blank Readings	Units
1,2-Dichloropropane	< 0.5	µg/L
1,3-Dichloropropane	< 0.5	µg/L
2,2-Dichloropropane	< 0.5	µg/L
1,1-Dichloropropene	< 0.5	µg/L
cis-1,3-Dichloropropene	< 0.5	µg/L
trans-1,3-Dichloropropene	< 0.5	µg/L
Ethyl Benzene	< 0.5	µg/L
Hexachlorobutadiene	< 0.5	µg/L
Isopropylbenzene	< 0.5	µg/L
p-Isopropyltoluene	< 0.5	µg/L
Methylene Chloride	0.55	µg/L
Naphthalene	< 0.5	µg/L
n-Propylbenzene	< 0.5	µg/L
Styrene	< 0.5	µg/L
1,1,1,2-Tetrachloroethane	< 0.5	µg/L
1,1,2,2-Tetrachloroethane	< 0.5	µg/L
Tetrachloroethene	< 0.5	µg/L
Toluene	< 0.5	µg/L
1,2,3-Trichlorobenzene	< 0.5	µg/L
1,2,4-Trichlorobenzene	< 0.5	µg/L
1,1,1-Trichloroethane	< 0.5	µg/L
1,1,2-Trichloroethane	< 0.5	µg/L
Trichloroethene	< 0.5	µg/L
Trichlorofluoromethane	< 0.5	µg/L
1,2,3-Trichloropropane	< 1.	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.5	µg/L
1,2,4-Trimethylbenzene	< 0.5	µg/L
1,3,5-Trimethylbenzene	< 0.5	µg/L

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1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

Constituents	Method Blank Readings	Units
Vinyl Chloride	< 0.5	µg/L
Total Xylenes	< 1.	µg/L
Acetone	<20.	µg/L
Acetonitrile	<20.	µg/L
Acrolein	<50.	µg/L
Acrylonitrile	<20.	µg/L
Allyl Chloride	< 5.	µg/L
t-Amyl methyl ether	< 1.	µg/L
t-Butyl alcohol	<50.	µg/L
Carbon Disulfide	< 2.	µg/L
Chloroprene	< 5.	µg/L
trans-1,4-Dichloro-2-butene	< 5.	µg/L
Diisopropyl ether	< 1.	µg/L
1,4-Dioxane	<300.	µg/L
2-Hexanone	<20.	µg/L
Iodomethane	< 2.	µg/L
Isobutyl alcohol	<50.	µg/L
Methacrylonitrile	<10.	µg/L
Methyl Ethyl Ketone	<20.	µg/L
4-Methyl-2-pentanone	<20.	µg/L
Methyl-t-butylether	< 0.5	µg/L
Propionitrile	<20.	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
METHOD 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

The trace detection for Methylene chloride is an estimated value between the MDL and PQL.

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Benzene	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	3.	20	102.	106.	80 - 120
Bromodichloromethane	01-07299-1	< 0.5	25.	25.	25.	25.	µg/L	2.	20	102.	99.	80 - 120
Chlorobenzene	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	0.	20	103.	103.	80 - 120
Chloroethane	01-07299-1	< 0.5	26.	28.	25.	25.	µg/L	7.	20	104.	111.	80 - 120
1,4-Dichlorobenzene	01-07299-1	< 0.5	25.	25.	25.	25.	µg/L	1.	20	100.	101.	80 - 120
1,1-Dichloroethane	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	2.	20	104.	105.	80 - 120
1,1-Dichloroethene	01-07299-1	< 0.5	26.	27.	25.	25.	µg/L	1.	20	106.	107.	80 - 120
Toluene	01-07299-1	< 0.5	25.	24.	25.	25.	µg/L	5.	20	100.	95.	80 - 120
Trichloroethene	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	0.	20	105.	105.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8260

Samples Affected: 01-07151-1 - 01-07151-3, 01-07151-10TB

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Benzene	CCV 4	23.	25.	µg/L	92.	80 - 120
Bromodichloromethane	CCV 4	23.	25.	µg/L	92.	80 - 120
Chlorobenzene	CCV 4	23.	25.	µg/L	92.	80 - 120
Chloroethane	CCV 4	23.	25.	µg/L	91.	80 - 120
1,4-Dichlorobenzene	CCV 4	24.	25.	µg/L	95.	80 - 120
1,1-Dichloroethane	CCV 4	23.	25.	µg/L	93.	80 - 120
1,1-Dichloroethene	CCV 4	23.	25.	µg/L	93.	80 - 120
Toluene	CCV 4	23.	25.	µg/L	92.	80 - 120
Trichloroethene	CCV 4	24.	25.	µg/L	95.	80 - 120

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 Compound #4 - #9	EPA-5030	06/28/2001	SLL/SM	EPA-8260	06/28/2001	SLL/SM

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	Method Blank Readings	Units
Benzene	< 0.5	µg/L
Bromobenzene	< 0.5	µg/L
Bromochloromethane	< 0.5	µg/L
Bromodichloromethane	< 0.5	µg/L
Bromoform	< 0.5	µg/L
Bromomethane	< 1.	µg/L
n-Butylbenzene	< 0.5	µg/L
sec-Butylbenzene	< 0.5	µg/L
tert-Butylbenzene	< 0.5	µg/L
Carbon tetrachloride	< 0.5	µg/L
Chlorobenzene	< 0.5	µg/L
Chloroethane	< 0.5	µg/L
Chloroform	< 0.5	µg/L
Chloromethane	< 0.5	µg/L
2-Chlorotoluene	< 0.5	µg/L
4-Chlorotoluene	< 0.5	µg/L
Dibromochloromethane	< 0.5	µg/L
1,2-Dibromo-3-Chloropropane	< 1.	µg/L
1,2-Dibromoethane	< 0.5	µg/L
Dibromomethane	< 0.5	µg/L
1,2-Dichlorobenzene	< 0.5	µg/L
1,3-Dichlorobenzene	< 0.5	µg/L
1,4-Dichlorobenzene	< 0.5	µg/L
Dichlorodifluoromethane	< 0.5	µg/L
1,1-Dichloroethane	< 0.5	µg/L
1,2-Dichloroethane	< 0.5	µg/L
1,1-Dichloroethene	< 0.5	µg/L
cis-1,2-Dichloroethene	< 0.5	µg/L
trans-1,2-Dichloroethene	< 0.5	µg/L

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(Instrumental & Blank Parameters)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	Method Blank Readings	Units
1,2-Dichloropropane	< 0.5	µg/L
1,3-Dichloropropane	< 0.5	µg/L
2,2-Dichloropropane	< 0.5	µg/L
1,1-Dichloropropene	< 0.5	µg/L
cis-1,3-Dichloropropene	< 0.5	µg/L
trans-1,3-Dichloropropene	< 0.5	µg/L
Ethyl Benzene	< 0.5	µg/L
Hexachlorobutadiene	< 0.5	µg/L
Isopropylbenzene	< 0.5	µg/L
p-Isopropyltoluene	< 0.5	µg/L
Methylene Chloride	< 1.	µg/L
Naphthalene	< 0.5	µg/L
n-Propylbenzene	< 0.5	µg/L
Styrene	< 0.5	µg/L
1,1,1,2-Tetrachloroethane	< 0.5	µg/L
1,1,2,2-Tetrachloroethane	< 0.5	µg/L
Tetrachloroethene	< 0.5	µg/L
Toluene	< 0.5	µg/L
1,2,3-Trichlorobenzene	< 0.5	µg/L
1,2,4-Trichlorobenzene	< 0.5	µg/L
1,1,1-Trichloroethane	< 0.5	µg/L
1,1,2-Trichloroethane	< 0.5	µg/L
Trichloroethene	< 0.5	µg/L
Trichlorofluoromethane	< 0.5	µg/L
1,2,3-Trichloropropane	< 1.	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.5	µg/L
1,2,4-Trimethylbenzene	< 0.5	µg/L
1,3,5-Trimethylbenzene	< 0.5	µg/L

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(Instrumental & Blank Parameters)
Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	Method Blank Readings	Units
Vinyl Chloride	< 0.5	µg/L
Total Xylenes	< 1.	µg/L
Acetone	<20.	µg/L
Acetonitrile	<20.	µg/L
Acrolein	<50.	µg/L
Acrylonitrile	<20.	µg/L
Allyl Chloride	< 5.	µg/L
t-Amyl methyl ether	< 1.	µg/L
t-Butyl alcohol	<50.	µg/L
Carbon Disulfide	< 2.	µg/L
Chloroprene	< 5.	µg/L
trans-1,4-Dichloro-2-butene	< 5.	µg/L
Diisopropyl ether	< 1.	µg/L
1,4-Dioxane	<300.	µg/L
2-Hexanone	<20.	µg/L
Iodomethane	< 2.	µg/L
Isobutyl alcohol	<50.	µg/L
Methacrylonitrile	<10.	µg/L
Methyl Ethyl Ketone	<20.	µg/L
4-Methyl-2-pentanone	<20.	µg/L
Methyl-t-butylether	< 0.5	µg/L
Propionitrile	<20.	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8260

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CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/17/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Benzene	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	3.	20	102.	106.	80 - 120
Bromodichloromethane	01-07299-1	< 0.5	25.	25.	25.	25.	µg/L	2.	20	102.	99.	80 - 120
Chlorobenzene	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	0.	20	103.	103.	80 - 120
Chloroethane	01-07299-1	< 0.5	26.	28.	25.	25.	µg/L	7.	20	104.	111.	80 - 120
1,4-Dichlorobenzene	01-07299-1	< 0.5	25.	25.	25.	25.	µg/L	1.	20	100.	101.	80 - 120
1,1-Dichloroethane	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	2.	20	104.	105.	80 - 120
1,1-Dichloroethene	01-07299-1	< 0.5	26.	27.	25.	25.	µg/L	1.	20	106.	107.	80 - 120
Toluene	01-07299-1	< 0.5	25.	24.	25.	25.	µg/L	5.	20	100.	95.	80 - 120
Trichloroethene	01-07299-1	< 0.5	26.	26.	25.	25.	µg/L	0.	20	105.	105.	80 - 120

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Benzene	CCV 6	24.	25.	µg/L	96.	80 - 120
Bromodichloromethane	CCV 6	25.	25.	µg/L	100.	80 - 120
Chlorobenzene	CCV 6	24.	25.	µg/L	96.	80 - 120
Chloroethane	CCV 6	24.	25.	µg/L	98.	80 - 120
1,4-Dichlorobenzene	CCV 6	25.	25.	µg/L	100.	80 - 120
1,1-Dichloroethane	CCV 6	25.	25.	µg/L	100.	80 - 120
1,1-Dichloroethene	CCV 6	24.	25.	µg/L	98.	80 - 120
Toluene	CCV 6	24.	25.	µg/L	95.	80 - 120
Trichloroethene	CCV 6	25.	25.	µg/L	98.	80 - 120

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8260

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/13/2001
Sample Matrix: Groundwater
QC Batch ID: 200107151-4*8260

Samples Affected: 01-07151-4 - 01-07151-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8260 Compounds	EPA-5030	06/28/2001	SLL/SM	EPA-8260	06/28/2001	SLL/SM

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 Compounds# -1,4,5	EPA-3510	06/29/2001	JCM	EPA-8270	07/05/2001	SKC
Method 8270 Compounds# -6,7	EPA-3510	06/29/2001	JCM	EPA-8270	07/06/2001	SKC

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	Method Blank Readings	Units
Acenaphthene	< 2.	µg/L
Acenaphthylene	< 2.	µg/L
Aldrin	< 2.	µg/L
Aniline	< 5.	µg/L
Anthracene	< 2.	µg/L
Benzidine	<20.	µg/L
Benzo (a) anthracene	< 2.	µg/L
Benzo (b) fluoranthene	< 2.	µg/L
Benzo (k) fluoranthene	< 2.	µg/L
Benzo (a) pyrene	< 2.	µg/L
Benzo (ghi) perylene	< 2.	µg/L
Benzoic Acid	<10.	µg/L
Benzyl alcohol	< 2.	µg/L
Butyl Benzyl phthalate	< 2.	µg/L
alpha-BHC	< 2.	µg/L
beta-BHC	< 2.	µg/L
delta-BHC	< 2.	µg/L
gamma-BHC	< 2.	µg/L
bis(2-chloroethyl)ether	< 2.	µg/L
bis(2-chloroethoxy)methane	< 2.	µg/L
bis(2-chloro-1-methylethyl) et	< 2.	µg/L
bis(2-ethylhexyl)phthalate	< 5.	µg/L
4-Bromophenyl phenyl ether	< 2.	µg/L
4-Chloroaniline	< 2.	µg/L
2-Chloronaphthalene	< 2.	µg/L
4-Chlorophenyl phenyl ether	< 2.	µg/L
Chrysene	< 2.	µg/L
4,4-DDD'	< 2.	µg/L
4,4-DDE'	< 3.	µg/L

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	Method Blank Readings	Units
4,4-DDT'	< 2.	µg/L
Dibenzo (a,h) anthracene	< 3.	µg/L
Dibenzofuran	< 2.	µg/L
Di-n-butyl phthalate	< 2.	µg/L
1,2-Dichlorobenzene	< 2.	µg/L
1,3-Dichlorobenzene	< 2.	µg/L
1,4-Dichlorobenzene	< 2.	µg/L
3,3-Dichlorobenzidine	<10.	µg/L
Dieldrin	< 3.	µg/L
Diethyl phthalate	< 2.	µg/L
Dimethyl phthalate	< 2.	µg/L
2,4-Dinitrotoluene	< 2.	µg/L
2,6-Dinitrotoluene	< 2.	µg/L
Di-n-octylphthalate	< 2.	µg/L
1,2-Diphenylhydrazine	< 2.	µg/L
Endosulfan I	<10.	µg/L
Endosulfan II	<10.	µg/L
Endosulfan sulfate	< 3.	µg/L
Endrin	< 2.	µg/L
Endrin aldehyde	<10.	µg/L
Fluoranthene	< 2.	µg/L
Fluorene	< 2.	µg/L
Heptachlor	< 2.	µg/L
Heptachlor epoxide	< 2.	µg/L
Hexachlorobenzene	< 2.	µg/L
Hexachlorobutadiene	< 2.	µg/L
Hexachlorocyclopentadiene	< 2.	µg/L
Hexachloroethane	< 2.	µg/L
Indeno (1,2,3-cd) pyrene	< 2.	µg/L

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(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	Method Blank Readings	Units
Isophorone	< 2.	µg/L
2-Methylnaphthalene	< 2.	µg/L
Naphthalene	< 2.	µg/L
2-Naphthylamine	<20.	µg/L
2-Nitroaniline	< 2.	µg/L
3-Nitroaniline	< 2.	µg/L
4-Nitroaniline	< 5.	µg/L
Nitrobenzene	< 2.	µg/L
n-Nitrosodimethylamine	< 2.	µg/L
n-Nitrosodiphenylamine	< 2.	µg/L
N-Nitrosodi-n-propylamine	< 2.	µg/L
Phenanthrene	< 2.	µg/L
Pyrene	< 2.	µg/L
1,2,4-Trichlorobenzene	< 2.	µg/L
4-Chloro-3-methylphenol	< 5.	µg/L
2-Chlorophenol	< 2.	µg/L
2,4-Dichlorophenol	< 2.	µg/L
2,4-Dimethylphenol	< 2.	µg/L
2,4-Dinitrophenol	<10.	µg/L
2-Methyl-4,6-dinitrophenol	<10.	µg/L
2-Methylphenol	< 2.	µg/L
3- & 4-Methylphenol	< 2.	µg/L
2-Nitrophenol	< 2.	µg/L
4-Nitrophenol	< 2.	µg/L
Pentachlorophenol	<10.	µg/L
Phenol	< 2.	µg/L
2,4,5-Trichlorophenol	< 5.	µg/L
2,4,6-Trichlorophenol	< 5.	µg/L
Acetophenone	<10.	µg/L

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QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	Method Blank Readings	Units
2-Acetylaminofluorene	<10.	µg/L
4-Aminobiphenyl	<20.	µg/L
2,6-Dichlorophenol	<10.	µg/L
p-(Dimethylamine) azobenzene	<10.	µg/L
7,12-Dimethylbenz (a) anthracene	<10.	µg/L
3,3'-Dimethylbenzidine	<20.	µg/L
Diphenylamine	<10.	µg/L
Ethyl methacrylate	<10.	µg/L
Ethyl methanesulfonate	<10.	µg/L
Kepone	<20.	µg/L
Methapyrilene	<10.	µg/L
3-Methylcholanthrene	<10.	µg/L
Methyl methanesulfonate	<10.	µg/L
1,4-Napthoquinone	<20.	µg/L
1-Napthylamine	<20.	µg/L
5-Nitro-o-toluidine	<10.	µg/L
n-Nitrosodibutylamine	<10.	µg/L
n-Nitrosomethylethylamine	<10.	µg/L
n-Nitrosopiperidine	<10.	µg/L
n-Nitrosopyrrolidine	<10.	µg/L
Pentachlorobenzene	<10.	µg/L
Pentachloronitrobenzene	<10.	µg/L
Phenacetin	<10.	µg/L
1,4-Phenylenediamine	<20.	µg/L
Pronamide	<10.	µg/L
1,2,4,5-Tetrachlorobenzene	<10.	µg/L
2,3,4,6-Tetrachlorophenol	<10.	µg/L
o-Toluidine	<10.	µg/L

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B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	Method Blank Readings	Units
0,0,0-Triethyl phosphorothioate	<10.	µg/L
1,3,5-Trinitrobenzene	<10.	µg/L

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE
DIAMOND BAR, CA 91765
RANDY BAUER

Date of Report: 07/20/2001
Sample Matrix: Sewer Effluent
QC Batch ID: 200107151-1*8270

Samples Affected: 01-07151-1, 01-07151-4 - 01-07151-7

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	SDI1-PB1-06-29	< 2.	69.01	67.20	80.00	80.00	µg/L	3.	14	86.	84.	62 - 116
1,4-Dichlorobenzene	SDI1-PB1-06-29	< 2.	67.75	66.32	80.00	80.00	µg/L	2.	19	85.	83.	56 - 116
2,4-Dinitrotoluene	SDI1-PB1-06-29	< 2.	72.76	71.41	80.00	80.00	µg/L	2.	14	91.	89.	67 - 126
Hexachlorobenzene	SDI1-PB1-06-29	< 2.	67.25	65.81	80.00	80.00	µg/L	2.	10	84.	82.	59 - 137
Hexachlorobutadiene	SDI1-PB1-06-29	< 2.	57.64	57.15	80.00	80.00	µg/L	1.	18	72.	71.	38 - 117
Hexachloroethane	SDI1-PB1-06-29	< 2.	66.45	65.67	80.00	80.00	µg/L	1.	25	83.	82.	44 - 127
Nitrobenzene	SDI1-PB1-06-29	< 2.	81.56	80.25	80.00	80.00	µg/L	2.	16	102.	100.	67 - 111
N-Nitrosodi-n-propylamine	SDI1-PB1-06-29	< 2.	73.21	73.95	80.00	80.00	µg/L	1.	15	92.	92.	51 - 123
Pyrene	SDI1-PB1-06-29	< 2.	73.69	69.01	80.00	80.00	µg/L	7.	12	92.	86.	31 - 151
1,2,4-Trichlorobenzene	SDI1-PB1-06-29	< 2.	66.66	66.64	80.00	80.00	µg/L	0.	18	83.	83.	51 - 119
4-Chloro-3-methylphenol	SDI1-PB1-06-29	< 5.	81.56	80.86	80.00	80.00	µg/L	1.	13	102.	101.	53 - 134
2-Chlorophenol	SDI1-PB1-06-29	< 2.	84.87	83.63	80.00	80.00	µg/L	1.	15	106.	105.	54 - 123
2-Methylphenol	SDI1-PB1-06-29	< 2.	79.29	78.09	80.00	80.00	µg/L	2.	12	99.	98.	55 - 113
3- & 4-Methylphenol	SDI1-PB1-06-29	< 2.	65.57	64.06	80.00	80.00	µg/L	2.	14	82.	80.	43 - 110
4-Nitrophenol	SDI1-PB1-06-29	< 2.	32.29	31.88	80.00	80.00	µg/L	1.	24	40.	40.	19 - 71
Pentachlorophenol	SDI1-PB1-06-29	< 10.	86.24	83.67	80.00	80.00	µg/L	3.	17	108.	105.	35 - 167
Phenol	SDI1-PB1-06-29	< 2.	42.60	41.61	80.00	80.00	µg/L	2.	15	53.	52.	33 - 59
2,4,6-Trichlorophenol	SDI1-PB1-06-29	< 5.	79.05	77.09	80.00	80.00	µg/L	3.	14	99.	96.	42 - 134

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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89362 GW

BAS
BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

PROJECT INFORMATION

PROJECT NAME: GREGORY CANYON
JOB NUMBER: —
PROJECT MANAGER: SARAH BATTELLE
LABORATORY: BABCOCK
SHIPMENT METHOD: LAB COURIER
TURNAROUND TIME:

DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

3 HRS
1 NaOH
1 HNO3
2 HCL
1 ZNAC
1 UNP.

BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CHLORIDE, SULFATE, NITRATE (N), TDS	METALS (Ca, Mg, Na)	CAM METALS (FULL 17 COC Suite, (excluding MO) + Tin	8260 VOC'S INCLUDING ISOBUTYL ALCOHOL X	8270 (SVOC'S INCLUDING PHENOLS X	Cyanide, SULFIDE	8150 (CHLORINATED HERBICIDES X	8080 (ORGANOCHLORINE PESTICIDES & PCBs X													
GLA-5		9-05-01	0910	GW	9	X	X	X	X	X	X	X	X													
GLA-11			1120		9	X	X	X	X	X	X	X	X													
GLA-12			1330		9	X	X	X	X	X	X	X	X													
GLA-13			1430		9	X	X	X	X	X	X	X	X													
GLA-14			1530		9	X	X	X	X	X	X	X	X													
GLA-16			1235		9	X	X	X	X	X	X	X	X													
GLA-DUP			—		9	X	X	X	X	X	X	X	X													
FIELD BLANK			—	W	1				X																	
EQUIP. BLANK			—		1				X																	
TRIP BLANK			—		1				X																	

HCL, HNO3, NaOH

HCL

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Ricardo Ramirez	9-06-01 0630	9-6-01 0730
	9-6-01 0810	

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed
Sample(s):
Integrity rec'd in good condit
Chilled
Sealed

COMMENTS:

TB 8/8/01 CSI 1030

Temp 5°C

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

E.S. BABCOCK & SONS, INC.
ESTABLISHED 1906

Environmental Laboratory Certification #1156
6100 Quail Valley Court Riverside, CA 92507-0704
P.O. Box 432 Riverside, CA 92502-0432
PH (909) 653-3351 FAX (909) 653-1662
e-mail: esbsales@aol.com
www.babcocklabs.com

Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/24/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010910/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010910/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010910/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010910/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010910/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010910/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010910/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010910/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010910/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010910/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010910/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010910/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010910/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010910/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010910/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010910/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010910/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010910/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/24/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010910/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010910/SM
BZ-198	-					010910/SM
Surr Percent Recovery:	80.5	%				

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

E.S. BABCOCK & SONS, INC.
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Laboratory Results

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Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery:	98.7	%				

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

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Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.31JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery:	97.6	%				
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery:	110.	%				
Toluene-d8	-					010913/HG
Surr Percent Recovery:	108.	%				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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ESB Project Reviewer

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010910/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010910/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010910/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010910/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010910/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010910/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010910/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010910/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010910/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010910/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010910/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010910/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010910/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010910/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010910/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010910/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010910/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010910/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010910/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010910/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010910/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010910/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010910/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010910/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010910/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010910/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010910/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010910/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010910/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010910/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010910/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010910/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010910/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010910/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010910/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010910/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010910/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010910/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010910/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010910/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010910/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010910/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010910/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010910/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010910/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010910/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010910/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010910/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010910/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010910/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010910/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010910/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010910/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010910/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010910/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010910/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010910/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010910/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010910/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010910/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010910/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010910/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010910/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010910/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010910/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010910/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010910/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010910/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010910/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010910/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010910/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010910/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010910/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010910/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010910/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010910/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010910/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010910/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010910/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010910/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010910/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010910/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010910/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010910/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010910/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010910/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010910/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010910/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010910/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010910/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010910/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010910/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010910/DI
2,4,6-Tribromophenol	-					010910/DI
Surr Percent Recovery: 104.	%					
2-Fluorobiphenyl	-					010910/DI
Surr Percent Recovery: 99.0	%					
2-Fluorophenol	-					010910/DI
Surr Percent Recovery: 52.6	%					
4-Terphenyl-d14	-					010910/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	96.2 %				
Nitrobenzene-d5	-				010910/DI
Surr Percent Recovery:	91.1 %				
Phenol-d6	-				010910/DI
Surr Percent Recovery:	32.3 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date Reported: 09/21/2001

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Submitted By: WBayle
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Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	110	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	58.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	140	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	350	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	150	mg/L	EPA 9056	1.	0.11	010907/DU
Nitrate-Nitrogen	21.	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	1120	mg/L	EPA 160.1	10	2.	010907/KL
Cyanide	ND	mg/L	EPA 9012	0.02	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	ND	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	170	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	2.2J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.52J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	2.2J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	0.70J	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	3.8J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.6J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	0.13J	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	38.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. Cyanide RL raised

cc:

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Laboratory Results

3264

Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-5
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-004

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0910
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	22.	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. Cyanide RL raised

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010910/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010910/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010910/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010910/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010910/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010910/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010910/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010910/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010910/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010910/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010910/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010910/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010910/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010910/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010910/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010910/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010910/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010910/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Laboratory Results

3264
Client:
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Mike Reason
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San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010910/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010910/SM
BZ-198	-					010910/SM
Surr Percent Recovery:	78.1	%				

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery:	98.6	%				

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Client:
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San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Laboratory Results

3264
Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.37JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery:	96.6	%				
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery:	105.	%				
Toluene-d8	-					010913/HG
Surr Percent Recovery:	106.	%				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. One Surrogate (2-Fluorophenol) below acceptance criteria.

cc:

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3264
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GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. One Surrogate (2-Fluorophenol) below acceptance criteria.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 30.6	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 80.4	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 12.6	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. One Surrogate (2-Fluorophenol) below acceptance criteria.

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Laboratory Results

3264
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GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	89.9 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	54.1 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	13.6 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. One Surrogate (2-Fluorophenol) below acceptance criteria.

cc:

ESB Project Reviewer

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Date Reported: 09/21/2001

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Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	93.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	31.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	120	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	94.	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	180	mg/L	EPA 9056	1.	0.11	010907/DU
Nitrate-Nitrogen	0.17J	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	750	mg/L	EPA 160.1	10	2.	010907/TF
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010912/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	0.26J	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	4.	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	3.9J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	8.7J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.45J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	3.9J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	19.	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	13.	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.5J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	5.0J	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Laboratory Results

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Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-11
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-005

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1120
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	24.	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

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Client:
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San Bernardino,CA 92408

Client I.D.: GLA-12
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010910/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010910/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010910/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010910/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010910/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010910/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010910/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.001	010910/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010910/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010910/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010910/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010910/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010910/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010910/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010910/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010910/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010910/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010910/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010910/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Laboratory Results

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Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-12
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010910/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010910/SM
BZ-198	-					010910/SM
Surr Percent Recovery:	82.0	%				

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

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Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery:	95.9	%				

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.3JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-12
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery: 90.6	%					
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery: 105.	%					
Toluene-d8	-					010913/HG
Surr Percent Recovery: 106.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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ESB Project Reviewer

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Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client I.D.: GLA-12
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-12
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-12
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 97.0	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 93.9	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 52.1	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	90.1 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	86.9 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	31.0 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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cc:

ESB Project Reviewer

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Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	48.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	27.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	86.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	46.	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	120	mg/L	EPA 9056	1.	0.11	010907/DU
Nitrate-Nitrogen	0.1J	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	510	mg/L	EPA 160.1	10	2.	010907/TF
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010912/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	0.45J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	17J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	3.6J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.27J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	5.2J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	0.10J	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	2.5J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	2.3J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	28.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-006

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1330
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	7.2J	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-13
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010911/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010911/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010911/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010911/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010911/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010911/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010911/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010911/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010911/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-13
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010911/SM
BZ-198	-					010911/SM
Surr Percent Recovery:	84.5	%				

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
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Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	0.17 J	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery: 101.	%					

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.35JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery: 100.	%					
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery: 110.	%					
Toluene-d8	-					010913/HG
Surr Percent Recovery: 101.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

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Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-13
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery:	90.0	%				
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery:	84.0	%				
2-Fluorophenol	-					010911/DI
Surr Percent Recovery:	41.3	%				
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-13
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1430
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	83.8 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	77.3 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	25.4 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	110	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	62.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	140	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	130	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	260	mg/L	EPA 9056	1.	0.11	010910/DU
Nitrate-Nitrogen	28.	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	1120	mg/L	EPA 160.1	10	2.	010907/TF
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010912/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	0.98J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	73J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	5.6J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.55J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	2.8J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	6.2J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	3.7J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	32.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Site: GREGORY CANYON
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Matrix: grndwater

Lab No.: L89362-007

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
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Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	53.	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010911/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010911/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010911/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010911/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010911/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010911/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010911/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010911/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010911/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Mike Reason
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San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010911/SM
BZ-198	-					010911/SM
Surr Percent Recovery: 79.7	%					

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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cc:

ESB Project Reviewer

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Laboratory Results

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San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery:	97.7	%				

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010912/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010912/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010912/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010912/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010912/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010912/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010912/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010912/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010912/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010912/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010912/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010912/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010912/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010912/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010912/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010912/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010912/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010912/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010912/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010912/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010912/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010912/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010912/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010912/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010912/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010912/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010912/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010912/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010912/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010912/HG
Carbon Disulfide	0.31JB	ug/L	EPA 8260	0.5	0.26	010912/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010912/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010912/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010912/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010912/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010912/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010912/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010912/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010912/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010912/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010912/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010912/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010912/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010912/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010912/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010912/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010912/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010912/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010912/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010912/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date Reported: 09/21/2001

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Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010912/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010912/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010912/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010912/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010912/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010912/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010912/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010912/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010912/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010912/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010912/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010912/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010912/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010912/HG
1,2-Dichloroethane-d4	-					010912/HG
Surr Percent Recovery: 92.6	%					
Bromofluorobenzene	-					010912/HG
Surr Percent Recovery: 104.	%					
Toluene-d8	-					010912/HG
Surr Percent Recovery: 110.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

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Client:
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Mike Reason
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San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery:	91.5	%				
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery:	83.3	%				
2-Fluorophenol	-					010911/DI
Surr Percent Recovery:	46.3	%				
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	83.4 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	75.4 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	28.7 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

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Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	73.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	38.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	94.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	71.	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	160	mg/L	EPA 9056	1.	0.11	010907/DU
Nitrate-Nitrogen	14.	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	730	mg/L	EPA 160.1	10	2.	010907/KL
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010912/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	1.4J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	110	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	3.8J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.35J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	1.4J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	6.7J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	3.2J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	25.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Laboratory Results

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San Bernardino,CA 92408

Client I.D.: GLA-14
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-008

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1530
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	5.4J	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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ESB Project Reviewer

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Laboratory Results

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San Bernardino,CA 92408

Client I.D.: GLA-16
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-009

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010911/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010911/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010911/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010911/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010911/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010911/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010911/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010911/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010911/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-16
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-009

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010911/SM
BZ-198	-					010911/SM
Surr Percent Recovery:	75.3	%				

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

E.S. BABCOCK & SONS, INC.
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Laboratory Results

3264
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Mike Reason
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San Bernardino,CA 92408

Client I.D.: GLA-16
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-009

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery:	99.3	%				

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Lab No.: L89362-009

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Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.32JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery:	93.6	%				
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery:	111.	%				
Toluene-d8	-					010913/HG
Surr Percent Recovery:	98.8	%				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Matrix: grndwater

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Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery:	95.5	%				
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery:	89.2	%				
2-Fluorophenol	-					010911/DI
Surr Percent Recovery:	52.7	%				
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-16
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-009

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	78.1 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	82.4 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	34.1 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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ESB Project Reviewer

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Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	82.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	36.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	80.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	120	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	110	mg/L	EPA 9056	1.	0.11	010907/DU
Nitrate-Nitrogen	7.1	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	750	mg/L	EPA 160.1	10	2.	010907/TF
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010912/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	1.4J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	75J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	8.8J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.39J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	1.2J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	2.9J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.8J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	29.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Mike Reason
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San Bernardino,CA 92408

Client I.D.: GLA-16
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-009

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 1235
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	4.4J	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010911/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010911/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010911/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010911/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010911/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010911/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010911/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010911/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010911/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010911/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010911/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010911/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010911/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010911/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

3264
Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010911/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010911/SM
BZ-198	-					010911/SM
Surr Percent Recovery:	79.1	%				

Date of Extraction: 09/07/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010911/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010911/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010911/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010911/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010911/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010911/SM
DCPAA	-					010911/SM
Surr Percent Recovery: 101.	%					

Date of Extraction: 09/06/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.28JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery:	93.4	%				
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery:	112.	%				
Toluene-d8	-					010913/HG
Surr Percent Recovery:	104.	%				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

ESB Project Reviewer

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San Bernardino,CA 92408

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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ESTABLISHED 1906

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

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Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 88.5	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 79.1	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 46.8	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	80.9 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	71.7 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	30.6 %				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

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Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	100	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	57.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	130	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	350	mg/L	EPA 9056	0.5	0.11	010907/DU
Chloride	150	mg/L	EPA 9056	1.	0.11	010907/DU
Nitrate-Nitrogen	21.	mg/L	EPA 9056	0.2	0.0090	010907/DU
Total Dissolved Solids	1130	mg/L	EPA 160.1	10	2.	010907/KL
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010912/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010906/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	ND	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	170	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	3.2J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.51J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	2.4J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	1.4J	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	3.9J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.7J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	38.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-DUPLICATE
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-010

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	28.	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: TRAVEL BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-001

Date Reported: 09/21/2001

Collected By: (ESB) CSI
Date: 08/08/2001
Time: 1030
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	7.8 J	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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Mike Reason
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San Bernardino,CA 92408

Client I.D.: TRAVEL BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-001

Date Reported: 09/21/2001

Collected By: (ESB) CSI
Date: 08/08/2001
Time: 1030
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.48JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	0.22 J	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	0.4 J	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: TRAVEL BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 3 of
Lab No.: L89362-001

Date Reported: 09/21/2001

Collected By: (ESB) CSI
Date: 08/08/2001
Time: 1030
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery: 100.	%					
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery: 113.	%					
Toluene-d8	-					010913/HG
Surr Percent Recovery: 102.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: FIELD BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-002

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: FIELD BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-002

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.27JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: FIELD BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-002

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery:	98.0	%				
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery:	113.	%				
Toluene-d8	-					010913/HG
Surr Percent Recovery:	101.	%				

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: EQUIPMENT BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89362-003

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010913/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010913/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010913/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010913/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010913/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010913/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010913/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010913/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010913/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010913/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010913/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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www.babcocklabs.com

Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: EQUIPMENT BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-003

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010913/HG
Carbon Disulfide	0.3JB	ug/L	EPA 8260	0.5	0.26	010913/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010913/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010913/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010913/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010913/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010913/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010913/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010913/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010913/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010913/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010913/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010913/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010913/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010913/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010913/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010913/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

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ESTABLISHED 1906

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: EQUIPMENT BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89362-003

Date Reported: 09/21/2001

Collected By: RR
Date: 09/05/2001
Time: 0000
Submitted By: WBayle
Date: 09/06/2001
Time: 0810

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010913/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010913/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010913/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010913/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010913/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010913/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010913/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010913/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010913/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010913/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010913/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010913/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010913/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010913/HG
1,2-Dichloroethane-d4	-					010913/HG
Surr Percent Recovery: 100.	%					
Bromofluorobenzene	-					010913/HG
Surr Percent Recovery: 108.	%					
Toluene-d8	-					010913/HG
Surr Percent Recovery: 103.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace(Less than RL, above MDL), value estimated. B = Analyte present in method blank.

cc:

ESB Project Reviewer

E.S. BABCOCK & SONS, INC.
ESTABLISHED 1906

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Organic Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 4,4'-DDD WG68045 **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: 4,4'-DDE WG68045 **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: 4,4'-DDT WG68045 **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: a-BHC WG68045 **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.050	ug/L	LCSGC	0.052	ug/L	---	104.	010910SM	37%	- 137%
WG68045-001	0.052	ug/L	LCSDGC	0.048	ug/L	8.0	---	010910SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	
Spike Value	0.050	ug/L	MSGC	0.057	ug/L	---	114.	010911SM		(a)
Sample Spiked:	L89362-010		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aldrin WG68045 **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aroclor 1016 WG68045 **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Aroclor 1221 **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aroclor 1232 **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aroclor 1242 **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aroclor 1248 **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aroclor 1254 **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Aroclor 1260 **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: b-BHC **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Chlordane **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: d-BHC **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Dieldrin **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.050	ug/L	LCSGC	0.042	ug/L	---	84.0	010910SM	25.6% - 155%	
WG68045-001	0.042	ug/L	LCSDGC	0.042	ug/L	0.0	---	010910SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	
Spike Value	0.050	ug/L	MSGC	0.048	ug/L	---	96.6	010911SM		(a)
Sample Spiked:	L89362-010		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Endosulfan I **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Endosulfan II **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Endosulfan Sulfate **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: Endrin **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Endrin Aldehyde **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	

Analyte: Heptachlor **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.050	ug/L	**LCSGC**	0.040	ug/L	---	80.0	010910SM	34% - 111%	
WG68045-001	0.040	ug/L	**LCSDGC**	0.041	ug/L	1.5	---	010910SM	Max 40 RPD	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	
Spike Value	0.050	ug/L	**MSGC**	0.043	ug/L	---	85.0	010911SM		(a)
Sample Spiked:	L89362-010		0.000	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	

Analyte: Heptachlor Epoxide **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	

Analyte: Hexachlorocyclopentadiene **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	

Analyte: Lindane **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	

Analyte: Methoxychlor **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910SM	< RL	

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Analyte: Toxaphene **WG68045** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910SM	< RL	

Analyte: 1,2,4,5-Tetrachlorobenzen **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 1,2,4-Trichlorobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	31.0	ug/L	---	62.0	010910DI/JS	44%	142%
WG68119-002	31.0	ug/L	LCSD	30.8	ug/L	0.74	---	010910DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MSGC	38.9	ug/L	---	77.9	010910DI/JS	(a)	
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 1,2-Dichlorobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 1,3,5-Trinitrobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 1,3-Dichlorobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 1,4-Dichlorobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	27.6	ug/L	---	55.2	010910DI/JS	20% - 124%	
WG68119-002	27.6	ug/L	LCSD	28.3	ug/L	2.6	---	010910DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MSGC	36.0	ug/L	---	71.9	010910DI/JS	(a)	
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 1-Naphthylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,3,4,6-Tetrachlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,4,5-Trichlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,4,6-Trichlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,4-Dichlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,4-Dimethylphenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Log #: L89362
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Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 2,4-Dinitrophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,4-Dinitrotoluene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	40.4	ug/L	---	80.8	010910DI/JS	39% - 139%	
WG68119-002	40.4	ug/L	LCSD	36.2	ug/L	11.	---	010910DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MSGC	44.2	ug/L	---	88.3	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,6-Dichlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,6-Dinitrotoluene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Acetylaminofluorene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Chloronaphthalene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Log #: L89362
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Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 2-Chlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	48.9	ug/L	---	65.2	010910DI/JS	23% - 134%	
WG68119-002	48.9	ug/L	LCSD	47.4	ug/L	3.1	---	010910DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MSGC	56.6	ug/L	---	75.4	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Methyl-4,6-Dinitropheno **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Methylnaphthalene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Naphthylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Nitroaniline **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Nitrophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2-Picoline **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 3,3'-Dichlorobenzidine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 3-Methylcholanthrene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 3-Nitroaniline **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 4-Aminobiphenyl **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 4-Bromophenyl phenyl ethe **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 4-Chloro-3-methylphenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	56.7	ug/L	---	75.6	010910DI/JS	22% - 147%	
WG68119-002	56.7	ug/L	LCSD	52.4	ug/L	7.9	---	010910DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MSGC	60.5	ug/L	---	80.7	010910DI/JS	(a)	
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 4-Chloroaniline **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Organic Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 4-Chlorophenyl phenyl eth **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 4-Nitroaniline **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 4-Nitrophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	18.0	ug/L	---	24.1	010910DI/JS	10% - 132%	
WG68119-002	18.0	ug/L	LCSD	18.1	ug/L	0.50	---	010910DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MSGC	26.4	ug/L	---	35.2	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: a,a-Dimethylphenethylamin **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Acenaphthene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	38.2	ug/L	---	76.3	010910DI/JS	47% - 145%	
WG68119-002	38.2	ug/L	LCSD	35.1	ug/L	8.5	---	010910DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MSGC	43.6	ug/L	---	87.1	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Acenaphthylene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Acetophenone **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Aniline **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Anthracene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Benzo(a)Anthracene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Benzo(a)pyrene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Benzo(b)fluoranthene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Benzo(ghi)perylene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Benzo(k)fluoranthene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Log #: L89362
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Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Benzyl Alcohol WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Bis(2-chloroethoxy)methan WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Bis(2-Chloroethyl)Ether WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Bis(2-chloroisopropyl)Eth WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Bis(2-ethylhexyl)phthalat WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Butylbenzyl Phthalate WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Chrysene WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Di-n-butyl Phthalate WG68119 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Di-n-octylphthalate **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Dibenzo(a,h)anthracene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Dibenzofuran **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Diethyl Phthalate **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Dimethyl Phthalate **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Dimethylbenz(a)anthracene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Dinoseb **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Diphenylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Analyte: Ethyl Methanesulfonate **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Fluoranthene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Fluorene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Hexachlorobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Hexachlorobutadiene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Hexachlorocyclopentadiene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Hexachloroethane **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Hexachloropropene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Indeno(1,2,3-cd)pyrene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Isophorone **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Isosafrole **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: m- & p-Cresol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Methyl Methanesulfonate **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: N-Nitrosodi-n-butylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: N-Nitrosodi-n-propylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	34.4	ug/L	---	68.9	010910DI/JS	10% - 230%	
WG68119-002	34.4	ug/L	LCSD	32.5	ug/L	5.8	---	010910DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MSGC	39.3	ug/L	---	78.6	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Analyte: N-Nitrosodimethylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: N-Nitrosodiphenylamine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: N-Nitrosopiperidine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Naphthalene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Nitrobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: o-Cresol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: o-Toluidine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: p-(Dimethylamino) Azobenz **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Analyte: Pentachlorobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Pentachloronitrobenzene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Pentachlorophenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	66.5	ug/L	---	88.6	010910DI/JS	14% - 176%	
WG68119-002	66.5	ug/L	LCSD	68.5	ug/L	3.0	---	010910DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MSGC	90.3	ug/L	---	120.	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Phenanthrene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Phenol **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	20.3	ug/L	---	27.0	010910DI/JS	5% - 112%	
WG68119-002	20.3	ug/L	LCSD	18.1	ug/L	11.	---	010910DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MSGC	24.7	ug/L	---	33.0	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010910DI/JS	< RL	

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Lab Number: L89362-001 to -010
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Analyte: Pyrene **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910DI/JS	< RL	
Spike Value	50.0	ug/L	**LCS**	39.0	ug/L	---	78.0	010910DI/JS	52% - 115%	
WG68119-002	39.0	ug/L	**LCSD**	35.0	ug/L	11.	---	010910DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	**MSGC**	42.9	ug/L	---	85.9	010910DI/JS		(a)
Sample Spiked:	L89362-004		0	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Pyridine **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: Safrole **WG68119** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010910DI/JS	< RL	

Analyte: 2,4,5-T **WG68089** **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010911SM	< RL	

Analyte: 2,4,5-TP Silvex **WG68089** **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	2.5	ug/L	**LCSGC**	2.3	ug/L	---	91.2	010911SM	54% - 154%	
WG68089-001	2.3	ug/L	**LCSDGC**	2.3	ug/L	0.088	---	010911SM	Max 40 RPD	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010911SM	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 2,4-D WG68089 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	5.0	ug/L	LCSGC	4.4	ug/L	---	87.8	010911SM	48% - 146%	
WG68089-001	4.4	ug/L	LCSDGC	4.4	ug/L	0.55	---	010911SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911SM	< RL	

Analyte: 2,4-DB WG68089 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911SM	< RL	

Analyte: Dalapon WG68089 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911SM	< RL	

Analyte: Dicamba WG68089 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911SM	< RL	

Analyte: Dichlorprop WG68089 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911SM	< RL	

Analyte: Dinoseb WG68089 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	5.0	ug/L	LCSGC	4.5	ug/L	---	90.7	010911SM	70% - 130%	
WG68089-001	4.5	ug/L	LCSDGC	4.8	ug/L	6.5	---	010911SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911SM	< RL	

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Organic Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 1,1,1,2-Tetrachloroethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,1,1-Trichloroethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	**LCSGCMS**	22.0	ug/L	---	88.2	010912HG	30% - 165%	
WG68180-001	22.0	ug/L	**LCSDGCMS**	22.7	ug/L	3.0	---	010912HG	Max 40 RPD	
Spike Value	25.0	ug/L	**LFB**	22.5	ug/L	---	89.9	010913HG	30% - 165%	
WG68180-003	22.5	ug/L	**LFBD**	22.9	ug/L	1.7	---	010913HG	Max 40 RPD	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,1,2,2-Tetrachloroethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,1,2-Trichloroethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,1-Dichloroethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89362
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Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 1,1-Dichloroethene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	24.3	ug/L	---	97.3	010912HG	20%	- 170%
WG68180-001	24.3	ug/L	LCSDGCMS	26.1	ug/L	7.1	---	010912HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	25.7	ug/L	---	103.	010913HG	20%	- 170%
WG68180-003	25.7	ug/L	LFBD	24.7	ug/L	3.9	---	010913HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,1-Dichloropropene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,2,3-Trichloropropane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,2,4-Trichlorobenzene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,2-Dichlorobenzene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

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Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 1,2-Dichloroethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	**LCSGCMS**	24.7	ug/L	---	99.0	010912HG	15%	- 175%
WG68180-001	24.7	ug/L	**LCSDGCMS**	26.0	ug/L	4.8	---	010912HG	Max 40 RPD	
Spike Value	25.0	ug/L	**LFB**	24.5	ug/L	---	98.0	010913HG	15%	- 175%
WG68180-003	24.5	ug/L	**LFBD**	25.5	ug/L	3.8	---	010913HG	Max 40 RPD	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,2-Dichloropropane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,3-Dichlorobenzene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,3-Dichloropropane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

Analyte: 1,4-Dichlorobenzene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	**LCSGCMS**	37.4	ug/L	---	149.	010912HG	15%	- 170%
WG68180-001	37.4	ug/L	**LCSDGCMS**	39.1	ug/L	4.6	---	010912HG	Max 40 RPD	
Spike Value	25.0	ug/L	**LFB**	37.4	ug/L	---	150.	010913HG	15%	- 170%
WG68180-003	37.4	ug/L	**LFBD**	38.2	ug/L	2.1	---	010913HG	Max 40 RPD	
Blank	0.000	ug/L	**MB**	0.37J	ug/L	---	---	010912HG	< RL	
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL	

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: 2,2-Dichloropropane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Acetone **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Benzene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	24.3	ug/L	---	97.0	010912HG	30%	165%
WG68180-001	24.3	ug/L	LCSDGCMS	24.7	ug/L	2.0	---	010912HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	24.3	ug/L	---	97.1	010913HG	30%	165%
WG68180-003	24.3	ug/L	LFBD	23.8	ug/L	2.2	---	010913HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Bromochloromethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Bromodichloromethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Bromoform **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

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Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Bromomethane WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Carbon Tetrachloride WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	22.7	ug/L	---	90.8	010912HG	30% - 165%	
WG68180-001	22.7	ug/L	LCSDGCMS	23.7	ug/L	4.2	---	010912HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	24.8	ug/L	---	99.2	010913HG	30% - 165%	
WG68180-003	24.8	ug/L	LFBD	24.0	ug/L	3.3	---	010913HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Chlorobenzene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Chloroethane WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Chloroform WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Chloromethane WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: cis-1,2-Dichloroethene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: cis-1,3-Dichloropropene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Dibromochloromethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Dibromomethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Dichlorodifluoromethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Ethylbenzene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Isobutyl Alcohol **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Methylene Chloride **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

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Log #: L89362
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Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Naphthalene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Styrene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Tetrachloroethene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: Toluene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: trans-1,2-Dichloroethene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

Analyte: trans-1,3-Dichloropropene WG68180 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010912HG	< RL	

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Organic Chemistry - Batch QC

Log #: L89362
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Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 21, 2001

Analyte: Trichloroethene **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL UCL
Spike Value	25.0	ug/L	**LCSGCMS**	27.2	ug/L	---	109.	010912HG	25% - 160%
WG68180-001	27.2	ug/L	**LCSDGCMS**	26.4	ug/L	2.7	---	010912HG	Max 40 RPD
Spike Value	25.0	ug/L	**LFB**	27.0	ug/L	---	108.	010913HG	25% - 160%
WG68180-003	27.0	ug/L	**LFBD**	24.3	ug/L	10.	---	010913HG	Max 40 RPD
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL

Analyte: Trichlorofluoromethane **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL

Analyte: Vinyl Chloride **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL UCL
Spike Value	25.0	ug/L	**LCSGCMS**	26.1	ug/L	---	104.	010912HG	.5% - 200%
WG68180-001	26.1	ug/L	**LCSDGCMS**	23.1	ug/L	12.	---	010912HG	Max 40 RPD
Spike Value	25.0	ug/L	**LFB**	23.6	ug/L	---	94.4	010913HG	.5% - 200%
WG68180-003	23.6	ug/L	**LFBD**	23.0	ug/L	2.6	---	010913HG	Max 40 RPD
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL

Analyte: Xylenes (m+p) **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL

Analyte: Xylenes (ortho) **WG68180** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010912HG	< RL

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

ESB Project Reviewer

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Antimony **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.5	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	25.0	ug/L	---	99.8	010913DA		(a)
WG68154-003	25.0	ug/L	**MSDICPMS**	23.8	ug/L	5.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.070	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.3	ug/L	---	96.6	010913DA		(a)
WG68154-007	24.3	ug/L	**MSDICPMS**	24.5	ug/L	0.93	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.13	ug/L						

Analyte: Arsenic **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.3	ug/L	---	105.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	28.9	ug/L	---	115.	010913DA		(a)
WG68154-003	28.9	ug/L	**MSDICPMS**	27.2	ug/L	6.2	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.254	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.6	ug/L	---	106.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	27.2	ug/L	---	107.	010913DA		(a)
WG68154-007	27.2	ug/L	**MSDICPMS**	27.5	ug/L	0.77	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.52	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Log #: L89362
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Lab Number: L89362-001 to -010
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Analyte: Barium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.6	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	194.	ug/L	---	112.	010913DA		(a)
WG68154-003	194.	ug/L	**MSDICPMS**	189.	ug/L	3.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		166.42217 ug/L							
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.9	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	119.	ug/L	---	112.	010913DA		(a)
WG68154-007	119.	ug/L	**MSDICPMS**	116.	ug/L	2.2	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		91	ug/L						

Analyte: Beryllium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.5	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	30.8	ug/L	---	123.	010913DA		(a)
WG68154-003	30.8	ug/L	**MSDICPMS**	28.2	ug/L	8.6	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.029	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	28.6	ug/L	---	114.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	26.0	ug/L	---	104.	010913DA		(a)
WG68154-007	26.0	ug/L	**MSDICPMS**	27.0	ug/L	3.9	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.032	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Cadmium WG68154 EPA 6020

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.5	ug/L	---	106.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.5	ug/L	---	97.7	010913DA		(a)
WG68154-003	24.5	ug/L	**MSDICPMS**	23.6	ug/L	3.7	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.040	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.6	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.0	ug/L	---	95.8	010913DA		(a)
WG68154-007	24.0	ug/L	**MSDICPMS**	24.1	ug/L	0.55	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.035	ug/L						

Analyte: Total Chromium WG68154 EPA 6020

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.2	ug/L	---	101.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	28.3	ug/L	---	104.	010913DA		(a)
WG68154-003	28.3	ug/L	**MSDICPMS**	28.1	ug/L	0.98	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		2.3	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	28.4	ug/L	---	113.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	26.3	ug/L	---	102.	010913DA		(a)
WG68154-007	26.3	ug/L	**MSDICPMS**	26.6	ug/L	1.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.72	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Cobalt **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.6	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.9	ug/L	---	97.7	010913DA	(a)	
WG68154-003	24.9	ug/L	**MSDICPMS**	24.6	ug/L	1.3	---	010913DA	Max 20 RPD (b)	
Sample Spiked:	L89362-004		0.52	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.6	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.9	ug/L	---	97.9	010913DA	(a)	
WG68154-007	24.9	ug/L	**MSDICPMS**	25.2	ug/L	1.2	---	010913DA	Max 20 RPD (b)	
Sample Spiked:	L89444-007		0.42	ug/L						

Analyte: Copper **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.9	ug/L	---	104.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	25.5	ug/L	---	93.1	010913DA	(a)	
WG68154-003	25.5	ug/L	**MSDICPMS**	25.0	ug/L	2.0	---	010913DA	Max 20 RPD (b)	
Sample Spiked:	L89362-004		2.2	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.1	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.0	ug/L	---	92.7	010913DA	(a)	
WG68154-007	24.0	ug/L	**MSDICPMS**	24.2	ug/L	0.98	---	010913DA	Max 20 RPD (b)	
Sample Spiked:	L89444-007		0.8	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Analyte: Lead **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.9	ug/L	---	104.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.7	ug/L	---	95.9	010913DA		(a)
WG68154-003	24.7	ug/L	**MSDICPMS**	24.5	ug/L	0.90	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.7	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.5	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.0	ug/L	---	95.8	010913DA		(a)
WG68154-007	24.0	ug/L	**MSDICPMS**	24.0	ug/L	0.11	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.017	ug/L						

Analyte: Mercury **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	2.5	ug/L	**LCSICPMS**	2.3	ug/L	---	90.1	010913DA	80% - 120%	
Spike Value	2.5	ug/L	**MSICPMS**	2.2	ug/L	---	86.9	010913DA		(a)
WG68154-003	2.2	ug/L	**MSDICPMS**	2.2	ug/L	0.79	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.027	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	2.5	ug/L	**LCSICPMS**	2.5	ug/L	---	98.2	010913DA	80% - 120%	
Spike Value	2.5	ug/L	**MSICPMS**	2.1	ug/L	---	82.2	010913DA		(a)
WG68154-007	2.1	ug/L	**MSDICPMS**	2.2	ug/L	4.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.057	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Analyte: Nickel **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.4	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	27.9	ug/L	---	96.5	010913DA		(a)
WG68154-003	27.9	ug/L	**MSDICPMS**	26.9	ug/L	3.8	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		3.8	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.2	ug/L	---	109.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	26.2	ug/L	---	94.8	010913DA		(a)
WG68154-007	26.2	ug/L	**MSDICPMS**	26.2	ug/L	0.098	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		2.5	ug/L						

Analyte: Selenium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	32.1	ug/L	---	122.	010913DA		(a)
WG68154-003	32.1	ug/L	**MSDICPMS**	30.8	ug/L	4.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		1.6	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.3	ug/L	---	109.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	29.3	ug/L	---	115.	010913DA		(a)
WG68154-007	29.3	ug/L	**MSDICPMS**	29.6	ug/L	1.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.444	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Analyte: Silver **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.4	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	22.7	ug/L	---	90.2	010913DA		(a)
WG68154-003	22.7	ug/L	**MSDICPMS**	21.7	ug/L	4.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.13	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	22.3	ug/L	---	89.2	010913DA		(a)
WG68154-007	22.3	ug/L	**MSDICPMS**	22.9	ug/L	2.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		-0.00	ug/L						

Analyte: Thallium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.4	ug/L	---	101.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	23.5	ug/L	---	93.8	010913DA		(a)
WG68154-003	23.5	ug/L	**MSDICPMS**	23.3	ug/L	0.54	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.024	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.9	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	23.5	ug/L	---	93.9	010913DA		(a)
WG68154-007	23.5	ug/L	**MSDICPMS**	23.6	ug/L	0.33	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.018	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Tin WG68154 EPA 6020

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	25.5	ug/L	---	102.	010913DA		(a)
WG68154-003	25.5	ug/L	**MSDICPMS**	24.4	ug/L	4.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		-0.00	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.7	ug/L	---	111.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.5	ug/L	---	98.1	010913DA		(a)
WG68154-007	24.5	ug/L	**MSDICPMS**	24.8	ug/L	1.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		-0.00	ug/L						

Analyte: Vanadium WG68154 EPA 6020

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	24.3	ug/L	---	97.4	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	62.3	ug/L	---	96.7	010913DA		(a)
WG68154-003	62.3	ug/L	**MSDICPMS**	65.0	ug/L	4.3	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		38.11766	ug/L						
Blank	0.000	ug/L	**MB**	0.34J	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.9	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	27.2	ug/L	---	99.7	010913DA		(a)
WG68154-007	27.2	ug/L	**MSDICPMS**	27.4	ug/L	0.56	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		2.3	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Zinc **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	4.4J	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.8	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	46.3	ug/L	---	95.2	010913DA		(a)
WG68154-003	46.3	ug/L	**MSDICPMS**	46.0	ug/L	0.74	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		22.49143 ug/L							
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	28.6	ug/L	---	114.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	30.0	ug/L	---	98.1	010913DA		(a)
WG68154-007	30.0	ug/L	**MSDICPMS**	29.9	ug/L	0.43	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		5.5 ug/L							

Analyte: Calcium **WG68155** **EPA 6010**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	0.14J	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	**LCSICP**	20.0	mg/L	---	99.8	010914LT	85% - 115%	
Spike Value	20.0	mg/L	**MSICP**	127.	mg/L	---	102.	010914LT		(a)
WG68155-003	127.	mg/L	**MSDICP**	126.	mg/L	0.71	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89362-004		106.2111968mg/L							
Blank	0.000	mg/L	**MB**	0.15J	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	**LCSICP**	20.3	mg/L	---	102.	010914LT	85% - 115%	
Spike Value	20.0	mg/L	**MSICP**	97.8	mg/L	---	82.6	010914LT		(a)
WG68155-007	97.8	mg/L	**MSDICP**	98.2	mg/L	0.38	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89444-007		81.3136645mg/L							

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Magnesium **WG68155** **EPA 6010**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	**LCSICP**	19.6	mg/L	---	97.8	010914LT	85% - 115%	
Spike Value	20.0	mg/L	**MSICP**	77.7	mg/L	---	97.5	010914LT		(a)
WG68155-003	77.7	mg/L	**MSDICP**	77.5	mg/L	0.33	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89362-004		58.24695161mg/L							
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	**LCSICP**	19.8	mg/L	---	99.0	010914LT	85% - 115%	
Spike Value	20.0	mg/L	**MSICP**	45.2	mg/L	---	92.8	010914LT		(a)
WG68155-007	45.2	mg/L	**MSDICP**	45.3	mg/L	0.21	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89444-007		26.6639795mg/L							

Analyte: Sodium **WG68155** **EPA 6010**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	0.13J	mg/L	---	---	010914LT	< RL	
Spike Value	40.0	mg/L	**LCSICP**	40.5	mg/L	---	101.	010914LT	85% - 115%	
Spike Value	40.0	mg/L	**MSICP**	179.	mg/L	---	104.	010914LT		(a)
WG68155-003	179.	mg/L	**MSDICP**	177.	mg/L	1.2	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89362-004		137.2655616mg/L							
Blank	0.000	mg/L	**MB**	0.14J	mg/L	---	---	010914LT	< RL	
Spike Value	40.0	mg/L	**LCSICP**	40.7	mg/L	---	102.	010914LT	85% - 115%	
Spike Value	40.0	mg/L	**MSICP**	103.	mg/L	---	94.6	010914LT		(a)
WG68155-007	103.	mg/L	**MSDICP**	103.	mg/L	0.17	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89444-007		65.43532816mg/L							

Analyte: Total Dissolved Solids **WG67999** **EPA 160.1**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	5.0J	mg/L	---	---	010907KLT	< RL	
Spike Value	746.	mg/L	**LCS**	757.	mg/L	---	101.	010907KLT	90% - 115%	
L89314-006	766.	mg/L	**DUP**	752.	mg/L	1.8	---	010907KLT	Max 20 RPD	(b)
L89362-004	1120.	mg/L	**DUP**	1142.	mg/L	1.9	---	010907KLT	Max 20 RPD	(b)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Total Dissolved Solids **WG68005** **EPA 160.1**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010907TF	< RL	
Spike Value	746.	mg/L	**LCS**	750.	mg/L	---	101.	010907TF	90% - 115%	
L89362-009	747.	mg/L	**DUP**	757.	mg/L	1.3	---	010907TF	Max 20 RPD (b)	

Analyte: Total Dissolved Solids **WG68018** **EPA 160.1**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010907KLT	< RL	
Spike Value	746.	mg/L	**LCS**	750.	mg/L	---	101.	010907KLT	90% - 115%	
L89420-005	571.	mg/L	**DUP**	572.	mg/L	0.17	---	010907KLT	Max 20 RPD (b)	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Chloride **WG67985** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.20J	mg/L	---	---	010907DU	< RL	
Blank	0.000	mg/L	MB	0.19J	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	11.0	mg/L	---	110.	010907DU	80%	120%
L89353-003	29.6	mg/L	DUP	29.5	mg/L	0.35	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	50.3	mg/L	---	103.	010907DU		(a)
Blank	0.000	mg/L	MB	0.19J	mg/L	---	---	010907DU	< RL	
L89362-008	155.	mg/L	DUP	155.	mg/L	0.32	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	174.	mg/L	---	95.3	010907DU		(a)
Blank	0.000	mg/L	MB	0.15J	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	11.0	mg/L	---	110.	010907DU	80%	120%
Blank	0.000	mg/L	MB	0.17J	mg/L	---	---	010907DU	< RL	
L89387-001	49.0	mg/L	DUP	48.1	mg/L	1.9	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	68.1	mg/L	---	95.3	010907DU		(a)
Blank	0.000	mg/L	MB	0.14J	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	11.0	mg/L	---	110.	010907DU	80%	120%
L89220-003	212.	mg/L	DUP	211.	mg/L	0.23	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	231.	mg/L	---	95.5	010907DU		(a)
Blank	0.000	mg/L	MB	0.28J	mg/L	---	---	010907DU	< RL	
Blank	0.000	mg/L	MB	0.19J	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	11.0	mg/L	---	110.	010907DU	80%	120%
L89415-006	205.	mg/L	DUP	204.	mg/L	0.71	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	224.	mg/L	---	95.8	010907DU		(a)
Blank	0.000	mg/L	MB	0.16J	mg/L	---	---	010907DU	< RL	
L89416-002	70.0	mg/L	DUP	69.9	mg/L	0.11	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	90.8	mg/L	---	104.	010907DU		(a)
Blank	0.000	mg/L	MB	0.17J	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	11.0	mg/L	---	110.	010907DU	80%	120%
L89420-002	237.	mg/L	DUP	237.	mg/L	0.16	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	259.	mg/L	---	106.	010907DU		(a)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Chloride **WG68078** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	0.81J	mg/L	---	---	010910DU	< RL	
Blank	0.000	mg/L	**MB**	0.63J	mg/L	---	---	010910DU	< RL	
Spike Value	10.0	mg/L	**LCS**	10.5	mg/L	---	105.	010910DU	80% - 120%	
L89406-002	22.9	mg/L	**DUP**	23.3	mg/L	1.5	---	010910DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	**MS**	40.5	mg/L	---	87.8	010910DU		(a)
Blank	0.000	mg/L	**MB**	0.43J	mg/L	---	---	010910DU	< RL	
L89499-001	120.	mg/L	**DUP**	120.	mg/L	0.29	---	010910DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	**MS**	140.	mg/L	---	102.	010910DU		(a)
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010910DU	< RL	
Spike Value	10.0	mg/L	**LCS**	10.8	mg/L	---	108.	010910DU	80% - 120%	
L89500-008	1.7	mg/L	**DUP**	1.5	mg/L	9.0	---	010910DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	**MS**	21.2	mg/L	---	97.4	010910DU		(a)
Blank	0.000	mg/L	**MB**	0.33J	mg/L	---	---	010910DU	< RL	
L89507-001	9.1	mg/L	**DUP**	8.7	mg/L	4.9	---	010910DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	**MS**	25.3	mg/L	---	80.9	010910DU		(a)
Blank	0.000	mg/L	**MB**	0.35J	mg/L	---	---	010910DU	< RL	
Spike Value	10.0	mg/L	**LCS**	10.3	mg/L	---	103.	010910DU	80% - 120%	
L89516-001	63.9	mg/L	**DUP**	64.1	mg/L	0.35	---	010910DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	**MS**	84.9	mg/L	---	105.	010910DU		(a)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Nitrate-Nitrogen **WG67985** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.02J	mg/L	---	---	010907DU	< RL	
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	10.3	mg/L	---	103.	010907DU	90% - 110%	
L89353-003	2.58	mg/L	DUP	2.60	mg/L	0.77	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	4.62	mg/L	---	102.	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
L89362-008	14.0	mg/L	DUP	13.6	mg/L	2.9	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	15.6	mg/L	---	82.0	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	10.2	mg/L	---	102.	010907DU	90% - 110%	
Blank	0.000	mg/L	MB	0.01J	mg/L	---	---	010907DU	< RL	
L89387-001	0.28	mg/L	DUP	0.28	mg/L	0.0	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	2.12	mg/L	---	92.0	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	10.1	mg/L	---	101.	010907DU	90% - 110%	
L89220-003	10.8	mg/L	DUP	11.0	mg/L	1.3	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	12.8	mg/L	---	99.0	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
L89406-002	16.2	mg/L	DUP	16.0	mg/L	1.1	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	18.0	mg/L	---	87.0	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	10.1	mg/L	---	101.	010907DU	90% - 110%	
L89415-006	0.22	mg/L	DUP	0.080	mg/L	93*	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.89	mg/L	---	83.5	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
L89416-002	0.52	mg/L	DUP	0.49	mg/L	5.9	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	2.34	mg/L	---	91.0	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	10.0	mg/L	LCS	10.1	mg/L	---	101.	010907DU	90% - 110%	
L89420-002	5.65	mg/L	DUP	5.43	mg/L	4.0	---	010907DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	7.51	mg/L	---	93.0	010907DU		(a)

* Analyte concentration below range for valid RPD determination.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Sulfate **WG67985** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.26J	mg/L	---	---	010907DU	< RL	
Blank	0.000	mg/L	MB	0.11J	mg/L	---	---	010907DU	< RL	
Spike Value	30.0	mg/L	LCS	33.0	mg/L	---	110.	010907DU	90% - 115%	
L89353-003	77.7	mg/L	DUP	77.3	mg/L	0.45	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	98.9	mg/L	---	106.	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
L89362-008	71.4	mg/L	DUP	72.3	mg/L	1.2	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	92.2	mg/L	---	104.	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	30.0	mg/L	LCS	33.0	mg/L	---	110.	010907DU	90% - 115%	
Blank	0.000	mg/L	MB	0.10J	mg/L	---	---	010907DU	< RL	
L89387-001	21.0	mg/L	DUP	20.2	mg/L	3.7	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	41.4	mg/L	---	102.	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	30.0	mg/L	LCS	32.5	mg/L	---	108.	010907DU	90% - 115%	
L89220-003	160.	mg/L	DUP	159.	mg/L	0.78	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	181.	mg/L	---	104.	010907DU		(a)
Blank	0.000	mg/L	MB	0.13J	mg/L	---	---	010907DU	< RL	
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	30.0	mg/L	LCS	32.3	mg/L	---	108.	010907DU	90% - 115%	
L89415-006	386.	mg/L	DUP	384.	mg/L	0.64	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	406.	mg/L	---	99.1	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
L89416-002	71.4	mg/L	DUP	70.8	mg/L	0.81	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	93.1	mg/L	---	109.	010907DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010907DU	< RL	
Spike Value	30.0	mg/L	LCS	31.8	mg/L	---	106.	010907DU	90% - 115%	
L89420-002	44.3	mg/L	DUP	43.1	mg/L	2.9	---	010907DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	64.0	mg/L	---	98.3	010907DU		(a)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89362
For Client: GeoLogic Associates
Date Rec'd: 09/06/2001
Lab Number: L89362-001 to -010
Date Printed: September 20, 2001

Analyte: Sulfide **WG67997** **EPA 376.2**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	0.0	mg/L	---	---	010906JD	< RL	
L89410-002	0.0	mg/L	**DUP**	0.0	mg/L	N/A	---	010906JD	Max 20 RPD	(b)
Blank	0.000	mg/L	**MB**	0.0	mg/L	---	---	010906JD	< RL	
L89418-001	0.030	mg/L	**DUP**	0.030	mg/L	0.0	---	010906JD	Max 20 RPD	(b)

Analyte: Cyanide **WG68047** **EPA 9012**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.118	mg/L	**LCS**	0.119	mg/L	---	101.	010912TF	70% - 130%	
Spike Value	0.118	mg/L	**MS**	0.110	mg/L	---	93.2	010912TF		(a)
WG68047-002	0.110	mg/L	**MSD**	0.050	mg/L	75*	---	010912TF	Max 20 RPD	(b)
Sample Spiked:	L89362-004	0	mg/L							

Analyte: Cyanide **WG68141** **EPA 9012**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.236	mg/L	**MS**	0.134	mg/L	---	** 56.8	010914TF		(a)
WG68047-002	0.134	mg/L	**MSD**	0.126	mg/L	6.2	---	010914TF	Max 20 RPD	(b)
Sample Spiked:	L89362-004	0	mg/L							
Spike Value	0.118	mg/L	**LCS**	0.118	mg/L	---	100.	010914TF	70% - 130%	
Spike Value	0.118	mg/L	**MS**	0.093	mg/L	---	78.8	010914TF		(a)
WG68141-002	0.093	mg/L	**MSD**	0.092	mg/L	1.1	---	010914TF	Max 20 RPD	(b)
Sample Spiked:	L89410-002	0	mg/L							

* RPD above target range - follow done and was within acceptance criteria, see WG68141 below.
** Acceptance criteria is 55-140 %.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

Ida Walker

L 89444

KE

BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

PROJECT INFORMATION

PROJECT NAME: GREGORY CANYON
JOB NUMBER:
PROJECT MANAGER: SARAH BUTTELLE
LABORATORY: BABCOCK
SHIPMENT METHOD: LAB COURIER
TURNAROUND TIME:
DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

	BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CHLORIDE, SULFATE, NITRATE (N), TDS	METALS (Ca, Mg, Na)	CAM METALS (FULL 17 COC SUITE (EXCLUDING MO) + TN	8260 (VOC'S INCLUDING TBUTYL ALCOHOL)	8270 (SVOC'S INCLUDING PHENOLS)	CYANIDE, SULFIDE	8150 (CHLORINATED HERBICIDES)	8080 (ORGANOCHLORINE PESTICIDES & PCBS)
4	GLA-2		9-06-01	0950	GW	9	X	X	X	X	X	X	X	X
5	GLA-4			0815		9	X	X	X	X	X	X	X	X
6	GLA-10			0920		9	X	X	X	X	X	X	X	X
7	MWD#34			1045		9	X	X	X	X	X	X	X	X
8	LUCIO#2			1155		9	X	X	X	X	X	X	X	X
9	SW-1			1215	SW	9	X	X	X	X	X	X	X	X
10	SW-2			1130	SW	9	X	X	X	X	X	X	X	X
3	EQUIP. BLANK			—	W	1				X				
2	FIELD BLANK			—		1				X				
1	TRIP BLANK			—		1				X				

SEP 07 2001

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Ricardo Ramirez	9-07-01 0630	9-7-01 0725
	9-7-01 0805	

SAMPLE CONDITION (Lab Initials)

Shipping Container:
Sealed NO KE
Sample(s):
Integrity good condn.
Chilled YES
Sealed NO

COMMENTS:

TB ~~0327011440~~ by KLT

TB = 082101@1500 by CIJima

Temp 7.0 C

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	79.1	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery:	86.2	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 119.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 99.8	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 100.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Client I.D.: GLA-2
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Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
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San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

3264
Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 69.7	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 91.2	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 50.1	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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San Bernardino,CA 92408

Client I.D.: GLA-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	98.8 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	85.6 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	31.5 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	180	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	96.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	240	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	190	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	600	mg/L	EPA 9056	1.	0.11	010911/KO
Nitrate-Nitrogen	43.	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	1940	mg/L	EPA 160.1	10	2.	010907/BP
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	1.9J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	66J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	0.31J	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	3.1J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.85J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	6.1J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	6.6J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	12.	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	1.8J	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	41.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-004

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0950
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	22.	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-4
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-4
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	66.2	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Date Reported: 10/01/2001

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Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery:	88.5	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Lab No.: L89444-005

Date Reported: 10/01/2001

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Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Collected By: RR
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Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Description:

Matrix: grndwater

Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 117.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 107.	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 101.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Matrix: grndwater

Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 56.5	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 51.4	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 26.1	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-4
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	83.8 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	45.0 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	18.3 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	71.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	20.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	77.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	42.	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	78.	mg/L	EPA 9056	1.	0.11	010908/DU
Nitrate-Nitrogen	1.6	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	480	mg/L	EPA 160.1	10	2.	010907/BP
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	0.13J	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	1.2J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	28J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	0.20J	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	7.1J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.44J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	5.5J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	0.19J	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	4.7J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	2.2J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	6.6J	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-4
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-005

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0815
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	1200	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-10
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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San Bernardino,CA 92408

Client I.D.: GLA-10
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	78.7	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery:	92.4	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Date Reported: 10/01/2001

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Date: 09/06/2001
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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	5.5	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 123.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 97.8	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 101.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-10
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

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Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 66.9	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 77.6	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 41.3	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-10
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	95.0 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	73.2 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	27.1 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	63.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	33.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	91.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	60.	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	140	mg/L	EPA 9056	1.	0.11	010908/DU
Nitrate-Nitrogen	5.4	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	1250	mg/L	EPA 160.1	10	2.	010907/BP
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	ND	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	61J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	3.0J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.40J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	2.0J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	0.29J	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	3.3J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	2.4J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	31.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: GLA-10
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-006

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0920
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	700	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Laboratory Results

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Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: MWD #34
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Mike Reason
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San Bernardino,CA 92408

Client I.D.: MWD #34
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	73.6	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery:	91.7	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: MWD #34
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 119.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 104.	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 103.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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San Bernardino,CA 92408

Client I.D.: MWD #34
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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San Bernardino,CA 92408

Client I.D.: MWD #34
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Matrix: grndwater

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
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Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 42.5	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: 57.8	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 31.9	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	65.6 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	54.0 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	20.1 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

E.S. BABCOCK & SONS, INC.
ESTABLISHED 1906

Environmental Laboratory Certification #1156
6100 Quail Valley Court Riverside, CA 92507-0704
P.O. Box 432 Riverside, CA 92502-0432
PH (909) 653-3351 FAX (909) 653-1662
e-mail: esbsales@aol.com
www.babcocklabs.com

Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: MWD #34
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1045
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	81.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	27.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	65.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	140	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	78.	mg/L	EPA 9056	1.	0.11	010908/DU
Nitrate-Nitrogen	0.04J	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	580	mg/L	EPA 160.1	10	2.	010907/BP
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	0.13J	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	0.52J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	91J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	0.72J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.42J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	0.8J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	2.5J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	ND	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	2.3J	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

Lab No.: L89444-007

Date Reported: 10/01/2001

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Time: 1045
Submitted By: W.Bayle
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Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	5.5J	ug/L	EPA 6020	10	2.0	010913/DA

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Client I.D.: LUCIO #2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89444-008

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1155
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

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Matrix: grndwater

Lab No.: L89444-008

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Collected By: RR
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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	65.7	%				

Date of Extraction: 09/11/2001
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Matrix: grndwater

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Date Reported: 10/01/2001

Collected By: RR
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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery: 94.3	%					

Date of Extraction: 09/11/2001
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Matrix: grndwater

Page: 4 of
Lab No.: L89444-008

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1155
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

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Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

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Matrix: grndwater

Lab No.: L89444-008

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1155
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 116.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 103.	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 104.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

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Matrix: grndwater

Lab No.: L89444-008

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1155
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: LUCIO #2
Site: GREGORY CANYON
Description:

Matrix: grndwater

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Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

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Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery:	67.5	%				
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery:	83.2	%				
2-Fluorophenol	-					010911/DI
Surr Percent Recovery:	46.1	%				
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Description:

Matrix: grndwater

Lab No.: L89444-008

Date Reported: 10/01/2001

Collected By: RR
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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	97.4 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	79.6 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	30.8 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	97.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	32.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	72.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	160	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	100	mg/L	EPA 9056	1.	0.11	010908/DU
Nitrate-Nitrogen	1.0	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	680	mg/L	EPA 160.1	10	2.	010910/KL
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	0.66J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	100	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	ND	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.59J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	5.7J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	3.8J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.8J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	14.	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	8.5J	ug/L	EPA 6020	10	2.0	010913/DA

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San Bernardino,CA 92408

Client I.D.: SW-1
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-009

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1215
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

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Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	57.0	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery: 92.4	%					

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: SW-1
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-009

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1215
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date Reported: 10/01/2001

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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	0.33 J	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 115.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 104.	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 102.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date Reported: 10/01/2001

Collected By: RR
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Time: 1215
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
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Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery:	68.1	%				
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery:	80.2	%				
2-Fluorophenol	-					010911/DI
Surr Percent Recovery:	46.0	%				
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Matrix: grndwater

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1215
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	93.6 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	76.0 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	30.4 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	86.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	33.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	80.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	220	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	120	mg/L	EPA 9056	1.	0.11	010908/DU
Nitrate-Nitrogen	0.1J	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	720	mg/L	EPA 160.1	10	2.	010910/KL
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	0.18J	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	2.	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	71J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	0.39J	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.42J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	0.85J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	2.8J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.4J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	9.2J	ug/L	EPA 6020	10	0.17	010913/DA

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: SW-1
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-009

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1215
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	9.3J	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: SW-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
4,4'-DDD	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
4,4'-DDE	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
4,4'-DDT	ND	ug/L	EPA 8080	0.1	0.02	010913/SM
Aldrin	ND	ug/L	EPA 8080	0.04	0.01	010913/SM
Aroclor 1016	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1221	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1232	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1242	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1248	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1254	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Aroclor 1260	ND	ug/L	EPA 8080	0.5	0.20	010913/SM
Chlordane	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Dieldrin	ND	ug/L	EPA 8080	0.02	0.01	010913/SM
Endosulfan I	ND	ug/L	EPA 8080	0.1	0.01	010913/SM
Endosulfan II	ND	ug/L	EPA 8080	0.04	0.02	010913/SM
Endosulfan Sulfate	ND	ug/L	EPA 8080	0.7	0.04	010913/SM
Endrin	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
Endrin Aldehyde	ND	ug/L	EPA 8080	0.2	0.03	010913/SM
Heptachlor	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Heptachlor Epoxide	ND	ug/L	EPA 8080	0.01	0.01	010913/SM
Hexachlorocyclopentadiene	ND	ug/L	EPA 8080	1.0	0.014	010913/SM
Lindane	ND	ug/L	EPA 8080	0.2	0.02	010913/SM
Methoxychlor	ND	ug/L	EPA 8080	10.	0.1	010913/SM
Toxaphene	ND	ug/L	EPA 8080	1.0	0.10	010913/SM
a-BHC	ND	ug/L	EPA 8080	0.03	0.02	010913/SM

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Client:
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Mike Reason
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San Bernardino,CA 92408

Client I.D.: SW-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
b-BHC	ND	ug/L	EPA 8080	0.06	0.01	010913/SM
d-BHC	ND	ug/L	EPA 8080	0.09	0.03	010913/SM
BZ-198	-					010913/SM
Surr Percent Recovery:	71.3	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Client I.D.: SW-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
2,4,5-T	ND	ug/L	EPA 8150	2.0	0.07	010917/SM
2,4,5-TP Silvex	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
2,4-D	ND	ug/L	EPA 8150	10.	0.07	010917/SM
2,4-DB	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dalapon	ND	ug/L	EPA 8150	10.	0.2	010917/SM
Dicamba	ND	ug/L	EPA 8150	1.5	0.07	010917/SM
Dichlorprop	ND	ug/L	EPA 8150	5.0	5.	010917/SM
Dinoseb	ND	ug/L	EPA 8150	2.0	0.06	010917/SM
DCAA	-					010917/SM
Surr Percent Recovery:	91.8	%				

Date of Extraction: 09/11/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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3264
Client:
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Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: SW-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 118.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 103.	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 103.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Client I.D.: SW-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,2,4,5-Tetrachlorobenzene	ND	ug/L	EPA 8270	10.	3.7	010911/DI
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8270	10.	3.8	010911/DI
1,2-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.3	010911/DI
1,3,5-Trinitrobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
1,3-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.4	010911/DI
1,4-Dichlorobenzene	ND	ug/L	EPA 8270	10.	4.2	010911/DI
1-Naphthylamine	ND	ug/L	EPA 8270	10.	9.8	010911/DI
2,3,4,6-Tetrachlorophenol	ND	ug/L	EPA 8270	10.	5.8	010911/DI
2,4,5-Trichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,4,6-Trichlorophenol	ND	ug/L	EPA 8270	10.	12.	010911/DI
2,4-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.7	010911/DI
2,4-Dimethylphenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
2,4-Dinitrophenol	ND	ug/L	EPA 8270	10.	6.2	010911/DI
2,4-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2,6-Dichlorophenol	ND	ug/L	EPA 8270	10.	3.2	010911/DI
2,6-Dinitrotoluene	ND	ug/L	EPA 8270	10.	2.2	010911/DI
2-Acetylaminofluorene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
2-Chloronaphthalene	ND	ug/L	EPA 8270	10.	3.0	010911/DI
2-Chlorophenol	ND	ug/L	EPA 8270	10.	3.8	010911/DI
2-Methyl-4,6-Dinitrophenol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
2-Methylnaphthalene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
2-Naphthylamine	ND	ug/L	EPA 8270	10.	6.6	010911/DI
2-Nitroaniline	ND	ug/L	EPA 8270	10.	2.3	010911/DI
2-Nitrophenol	ND	ug/L	EPA 8270	10.	3.9	010911/DI
2-Picoline	ND	ug/L	EPA 8270	10.	4.7	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated. 2 of 6 surrogates below acceptance range. Not enough sample to re-extract. Results suspect.

cc:

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Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
3,3'-Dichlorobenzidine	ND	ug/L	EPA 8270	10.	2.0	010911/DI
3-Methylcholanthrene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
3-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Aminobiphenyl	ND	ug/L	EPA 8270	10.	2.1	010911/DI
4-Bromophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Chloro-3-methylphenol	ND	ug/L	EPA 8270	10.	2.6	010911/DI
4-Chloroaniline	ND	ug/L	EPA 8270	10.	3.1	010911/DI
4-Chlorophenyl phenyl ether	ND	ug/L	EPA 8270	10.	2.7	010911/DI
4-Nitroaniline	ND	ug/L	EPA 8270	10.	1.5	010911/DI
4-Nitrophenol	ND	ug/L	EPA 8270	10.	1.1	010911/DI
Acenaphthene	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Acenaphthylene	ND	ug/L	EPA 8270	10.	2.8	010911/DI
Acetophenone	ND	ug/L	EPA 8270	10.	3.1	010911/DI
Aniline	ND	ug/L	EPA 8270	10.	2.7	010911/DI
Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)Anthracene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(a)pyrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Benzo(b)fluoranthene	ND	ug/L	EPA 8270	10.	1.9	010911/DI
Benzo(ghi)perylene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Benzo(k)fluoranthene	ND	ug/L	EPA 8270	10.	5.0	010911/DI
Benzyl Alcohol	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Bis(2-Chloroethyl)Ether	ND	ug/L	EPA 8270	10.	4.2	010911/DI
Bis(2-chloroethoxy)methane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Bis(2-chloroisopropyl)Ether	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Bis(2-ethylhexyl)phthalate	ND	ug/L	EPA 8270	10.	2.0	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated. 2 of 6 surrogates below acceptance range. Not enough sample to re-extract. Results suspect.

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3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: SW-2
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Butylbenzyl Phthalate	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Chrysene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Di-n-butyl Phthalate	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Di-n-octylphthalate	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Dibenzo(a,h)anthracene	ND	ug/L	EPA 8270	10.	2.0	010911/DI
Dibenzofuran	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Diethyl Phthalate	ND	ug/L	EPA 8270	10.	2.2	010911/DI
Dimethyl Phthalate	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dimethylbenz(a)anthracene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Dinoseb	ND	ug/L	EPA 8270	10.	3.8	010911/DI
Diphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Ethyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Fluoranthene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Fluorene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Hexachlorobenzene	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Hexachlorobutadiene	ND	ug/L	EPA 8270	10.	3.6	010911/DI
Hexachlorocyclopentadiene	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Hexachloroethane	ND	ug/L	EPA 8270	10.	4.1	010911/DI
Hexachloropropene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Indeno(1,2,3-cd)pyrene	ND	ug/L	EPA 8270	10.	2.3	010911/DI
Isophorone	ND	ug/L	EPA 8270	10.	2.4	010911/DI
Isosafrole	ND	ug/L	EPA 8270	10.	3.0	010911/DI
Methyl Methanesulfonate	ND	ug/L	EPA 8270	10.	2.0	010911/DI
N-Nitrosodi-n-butylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosodi-n-propylamine	ND	ug/L	EPA 8270	10.	2.8	010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated. 2 of 6 surrogates below acceptance range. Not enough sample to re-extract. Results suspect.

cc:

E.S. BABCOCK & SONS, INC.
ESTABLISHED 1906

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Constituent	Result		Method	RL	MDL	Date / Analyst
N-Nitrosodimethylamine	ND	ug/L	EPA 8270	10.	1.9	010911/DI
N-Nitrosodiphenylamine	ND	ug/L	EPA 8270	10.	2.1	010911/DI
N-Nitrosopiperidine	ND	ug/L	EPA 8270	10.	1.6	010911/DI
Naphthalene	ND	ug/L	EPA 8270	10.	3.5	010911/DI
Nitrobenzene	ND	ug/L	EPA 8270	10.	3.4	010911/DI
Pentachlorobenzene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Pentachloronitrobenzene	ND	ug/L	EPA 8270	10.	2.1	010911/DI
Pentachlorophenol	ND	ug/L	EPA 8270	10.	5.1	010911/DI
Phenanthrene	ND	ug/L	EPA 8270	10.	2.6	010911/DI
Phenol	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyrene	ND	ug/L	EPA 8270	10.	1.7	010911/DI
Pyridine	ND	ug/L	EPA 8270	10.	2.9	010911/DI
Safrole	ND	ug/L	EPA 8270	10.	2.5	010911/DI
a,a-Dimethylphenethylamine	ND	ug/L	EPA 8270	10.	10.	010911/DI
m- & p-Cresol	ND	ug/L	EPA 8270	10.	4.5	010911/DI
o-Cresol	ND	ug/L	EPA 8270	10.	2.5	010911/DI
o-Toluidine	ND	ug/L	EPA 8270	10.	3.4	010911/DI
p-(Dimethylamino) Azobenzene	ND	ug/L	EPA 8270	10.	2.7	010911/DI
2,4,6-Tribromophenol	-					010911/DI
Surr Percent Recovery: 31.6	%					
2-Fluorobiphenyl	-					010911/DI
Surr Percent Recovery: *37.4	%					
2-Fluorophenol	-					010911/DI
Surr Percent Recovery: 27.4	%					
4-Terphenyl-d14	-					010911/DI

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Description:

Matrix: grndwater

Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result	Method	RL	MDL	Date / Analyst
Surr Percent Recovery:	47.8 %				
Nitrobenzene-d5	-				010911/DI
Surr Percent Recovery:	*34.4 %				
Phenol-d6	-				010911/DI
Surr Percent Recovery:	22.4 %				

Date of Extraction: 09/10/2001
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated. *2 of 6 surrogates below acceptance range. Not enough sample to re-extract. Results suspect.

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Lab No.: L89444-010

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Calcium	91.	mg/L	EPA 6010	1.	0.045	010914/LT
Magnesium	33.	mg/L	EPA 6010	1.	0.057	010914/LT
Sodium	80.	mg/L	EPA 6010	1.	0.047	010914/LT
Sulfate	210	mg/L	EPA 9056	0.5	0.11	010908/DU
Chloride	120	mg/L	EPA 9056	1.	0.11	010908/DU
Nitrate-Nitrogen	0.15J	mg/L	EPA 9056	0.2	0.0090	010908/DU
Total Dissolved Solids	730	mg/L	EPA 160.1	10	2.	010910/KL
Cyanide	ND	mg/L	EPA 9012	0.01	0.0006	010914/TF
Sulfide	ND	mg/L	EPA 376.2	0.1	0.1	010907/JD
Antimony	ND	ug/L	EPA 6020	6.	0.12	010913/DA
Arsenic	1.6J	ug/L	EPA 6020	2.	0.30	010913/DA
Barium	82J	ug/L	EPA 6020	100	0.13	010913/DA
Beryllium	ND	ug/L	EPA 6020	1.	0.42	010913/DA
Cadmium	ND	ug/L	EPA 6020	1.	0.12	010913/DA
Total Chromium	ND	ug/L	EPA 6020	10	0.12	010913/DA
Cobalt	0.47J	ug/L	EPA 6020	10	0.10	010913/DA
Copper	0.92J	ug/L	EPA 6020	10	0.16	010913/DA
Lead	ND	ug/L	EPA 6020	5.	0.098	010913/DA
Mercury	ND	ug/L	EPA 6020	1.	0.43	010913/DA
Nickel	3.1J	ug/L	EPA 6020	10	0.73	010913/DA
Selenium	1.0J	ug/L	EPA 6020	5.	0.93	010913/DA
Silver	ND	ug/L	EPA 6020	10	0.098	010913/DA
Thallium	ND	ug/L	EPA 6020	1.	0.063	010913/DA
Tin	ND	ug/L	EPA 6020	10	0.083	010913/DA
Vanadium	6.4J	ug/L	EPA 6020	10	0.17	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 1130
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Zinc	7.4J	ug/L	EPA 6020	10	2.0	010913/DA

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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ESB Project Reviewer

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San Bernardino,CA 92408

Client I.D.: TRAVEL BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Page: 1 of
Lab No.: L89444-001

Date Reported: 10/01/2001

Collected By: CSI (ESB)
Date: 08/21/2001
Time: 1500
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

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Date: 08/21/2001
Time: 1500
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

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Date: 08/21/2001
Time: 1500
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent		Result		Method	RL	MDL	Date / Analyst
Propionitrile		ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene		ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene		ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene		ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene		ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane		ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate		ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride		ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)		ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)		ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene		ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene		ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene		ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene		ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4		-					010915/HG
Surr Percent Recovery:	115.	%					
Bromofluorobenzene		-					010915/HG
Surr Percent Recovery:	107.	%					
Toluene-d8		-					010915/HG
Surr Percent Recovery:	102.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

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Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: FIELD BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-002

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0000
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: FIELD BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-002

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0000
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 115.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 99.8	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 102.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: EQUIPMENT BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-003

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0000
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
1,1,1,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,1,1-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.38	010915/HG
1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 8260	0.5	0.099	010915/HG
1,1,2-Trichloroethane	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
1,1-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,1-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.34	010915/HG
1,1-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
1,2,3-Trichloropropane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
1,2,4-Trichlorobenzene	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
1,2-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.12	010915/HG
1,2-Dichloroethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
1,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
1,3-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
1,3-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
1,4-Dichloro-2-Butene	ND	ug/L	EPA 8260	5.0	1.7	010915/HG
1,4-Dichlorobenzene	ND	ug/L	EPA 8260	0.5	0.29	010915/HG
2,2-Dichloropropane	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
2-Butanone(MEK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
2-Hexanone	ND	ug/L	EPA 8260	5.0	0.85	010915/HG
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	EPA 8260	5.0	1.2	010915/HG
Acetone	ND	ug/L	EPA 8260	10.	4.2	010915/HG
Acetonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Acrolein	ND	ug/L	EPA 8260	10.	7.2	010915/HG
Acrylonitrile	ND	ug/L	EPA 8260	10.	3.6	010915/HG
Allyl Chloride	ND	ug/L	EPA 8260	5.0	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: EQUIPMENT BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-003

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0000
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Benzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Bromochloromethane	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Bromodichloromethane	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Bromoform	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Bromomethane	ND	ug/L	EPA 8260	0.5	0.36	010915/HG
Carbon Disulfide	ND	ug/L	EPA 8260	0.5	0.26	010915/HG
Carbon Tetrachloride	ND	ug/L	EPA 8260	0.5	0.49	010915/HG
Chlorobenzene	ND	ug/L	EPA 8260	0.5	0.31	010915/HG
Chloroethane	ND	ug/L	EPA 8260	0.5	0.21	010915/HG
Chloroform	ND	ug/L	EPA 8260	0.5	0.28	010915/HG
Chloromethane	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Chloroprene	ND	ug/L	EPA 8260	10.	10.	010915/HG
Dibromochloromethane	ND	ug/L	EPA 8260	0.5	0.24	010915/HG
Dibromochloropropane	ND	ug/L	EPA 8260	5.0	0.46	010915/HG
Dibromomethane	ND	ug/L	EPA 8260	0.5	0.35	010915/HG
Dichlorodifluoromethane	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Ethyl Methacrylate	ND	ug/L	EPA 8260	0.5	0.23	010915/HG
Ethylbenzene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
Ethylene dibromide	ND	ug/L	EPA 8260	0.5	0.32	010915/HG
Iodomethane	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Isobutyl Alcohol	ND	ug/L	EPA 8260	100	7.6	010915/HG
Methacrylonitrile	ND	ug/L	EPA 8260	10.	2.5	010915/HG
Methyl Methacrylate	ND	ug/L	EPA 8260	10.	0.32	010915/HG
Methylene Chloride	ND	ug/L	EPA 8260	3.0	0.27	010915/HG
Naphthalene	ND	ug/L	EPA 8260	0.5	0.42	010915/HG

ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

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Laboratory Results

3264
Client:
GeoLogic Associates
Mike Reason
1831 Commercenter East

San Bernardino,CA 92408

Client I.D.: EQUIPMENT BLANK
Site: GREGORY CANYON
Description:

Matrix: grndwater

Lab No.: L89444-003

Date Reported: 10/01/2001

Collected By: RR
Date: 09/06/2001
Time: 0000
Submitted By: W.Bayle
Date: 09/07/2001
Time: 0805

Constituent	Result		Method	RL	MDL	Date / Analyst
Propionitrile	ND	ug/L	EPA 8260	200	2.6	010915/HG
Styrene	ND	ug/L	EPA 8260	0.5	0.19	010915/HG
Tetrachloroethene	ND	ug/L	EPA 8260	0.5	0.086	010915/HG
Toluene	ND	ug/L	EPA 8260	0.5	0.22	010915/HG
Trichloroethene	ND	ug/L	EPA 8260	0.5	0.27	010915/HG
Trichlorofluoromethane	ND	ug/L	EPA 8260	5.0	0.23	010915/HG
Vinyl Acetate	ND	ug/L	EPA 8260	10.	1.2	010915/HG
Vinyl Chloride	ND	ug/L	EPA 8260	0.5	0.25	010915/HG
Xylenes (m+p)	ND	ug/L	EPA 8260	0.5	0.30	010915/HG
Xylenes (ortho)	ND	ug/L	EPA 8260	0.5	0.13	010915/HG
cis-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.18	010915/HG
cis-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.37	010915/HG
trans-1,2-Dichloroethene	ND	ug/L	EPA 8260	0.5	0.20	010915/HG
trans-1,3-Dichloropropene	ND	ug/L	EPA 8260	0.5	0.45	010915/HG
1,2-Dichloroethane-d4	-					010915/HG
Surr Percent Recovery: 118.	%					
Bromofluorobenzene	-					010915/HG
Surr Percent Recovery: 106.	%					
Toluene-d8	-					010915/HG
Surr Percent Recovery: 102.	%					

Date of Extraction: Not Applicable
ND = None detected at MDL (Method Detection Limit). RL & MDL units same as result.

J=Trace (Less than RL, above MDL) value estimated.

cc:

ESB Project Reviewer

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 1,2,4-Trichlorobenzene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	30.9	ug/L	---	61.8	010911DI/JS	44% - 142%	
WG68124-002	30.9	ug/L	LCSD	17.4	ug/L	56.*	---	010911DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MS	30.9	ug/L	---	61.8	010911DI/JS	(a)	
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 1,2-Dichlorobenzene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 1,3,5-Trinitrobenzene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 1,3-Dichlorobenzene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 1,4-Dichlorobenzene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	27.9	ug/L	---	55.7	010911DI/JS	20% - 124%	
WG68124-002	27.9	ug/L	LCSD	15.7	ug/L	56.*	---	010911DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MS	27.9	ug/L	---	55.7	010911DI/JS	(a)	
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 1-Naphthylamine **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

* RPD above acceptance criteria.

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 2,3,4,6-Tetrachlorophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,4,5-Trichlorophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,4,6-Trichlorophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,4-Dichlorophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,4-Dimethylphenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,4-Dinitrophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,4-Dinitrotoluene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	36.8	ug/L	---	73.5	010911DI/JS	39% - 139%	
WG68124-002	36.8	ug/L	LCSD	33.6	ug/L	8.9	---	010911DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MS	36.8	ug/L	---	73.5	010911DI/JS		(a)
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 2,6-Dichlorophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2,6-Dinitrotoluene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Acetylaminofluorene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Chloronaphthalene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Chlorophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	46.4	ug/L	---	61.9	010911DI/JS	23% - 134%	
WG68124-002	46.4	ug/L	LCSD	27.9	ug/L	50 *	---	010911DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MS	46.4	ug/L	---	61.9	010911DI/JS		(a)
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Methyl-4,6-Dinitropheno WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Methylnaphthalene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

* RPD above acceptance criteria - both LCS/LCSD recoveries within control limits.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 2-Naphthylamine WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Nitroaniline WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Nitrophenol WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 2-Picoline WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 3,3'-Dichlorobenzidine WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 3-Methylcholanthrene WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 3-Nitroaniline WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 4-Aminobiphenyl WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 4-Bromophenyl phenyl ethe WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 4-Chloro-3-methylphenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	49.8	ug/L	---	66.4	010911DI/JS	22% - 147%	
WG68124-002	49.8	ug/L	LCSD	38.0	ug/L	27.	---	010911DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MS	49.8	ug/L	---	66.4	010911DI/JS		(a)
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 4-Chloroaniline WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 4-Chlorophenyl phenyl eth WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 4-Nitroaniline WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 4-Nitrophenol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	32.9	ug/L	---	43.9	010911DI/JS	10% - 132%	
WG68124-002	32.9	ug/L	LCSD	18.5	ug/L	56.*	---	010911DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MS	32.9	ug/L	---	43.9	010911DI/JS		(a)
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

* RPD above acceptance criteria - both LCS/LCSD recoveries within control limits.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: a,a-Dimethylphenethylamin **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Acenaphthene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	36.3	ug/L	---	72.6	010911DI/JS	47% - 145%	
WG68124-002	36.3	ug/L	LCSD	26.9	ug/L	30.	---	010911DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MS	36.3	ug/L	---	72.6	010911DI/JS	(a)	
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Acenaphthylene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Acetophenone **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Aniline **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Anthracene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Benzo(a)Anthracene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Benzo(a)pyrene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Benzo(b)fluoranthene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Benzo(ghi)perylene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Benzo(k)fluoranthene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Benzyl Alcohol WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Bis(2-chloroethoxy)methan WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Bis(2-Chloroethyl)Ether WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Bis(2-chloroisopropyl)Eth WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Bis(2-ethylhexyl)phthalat WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Butylbenzyl Phthalate WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Chrysene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Di-n-butyl Phthalate WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Di-n-octylphthalate WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Dibenzo(a,h)anthracene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Dibenzofuran WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Diethyl Phthalate WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Dimethyl Phthalate WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Dimethylbenz(a)anthracene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Dinoseb WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Diphenylamine WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Ethyl Methanesulfonate WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Fluoranthene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Fluorene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Hexachlorobenzene WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
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Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Hexachlorobutadiene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Hexachlorocyclopentadiene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Hexachloroethane **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Hexachloropropene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Indeno(1,2,3-cd)pyrene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Isophorone **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Isosafrole **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: m- & p-Cresol **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Methyl Methanesulfonate **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: N-Nitrosodi-n-butylamine **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: N-Nitrosodi-n-propylamine **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	35.5	ug/L	---	70.9	010911DI/JS	10% - 230%	
WG68124-002	35.5	ug/L	LCSD	24.1	ug/L	38.	---	010911DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MS	35.5	ug/L	---	70.9	010911DI/JS	(a)	
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: N-Nitrosodimethylamine **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: N-Nitrosodiphenylamine **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: N-Nitrosopiperidine **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Naphthalene **WG68124** **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Nitrobenzene WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: o-Cresol WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: o-Toluidine WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: p-(Dimethylamino) Azobenz WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Pentachlorobenzene WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Pentachloronitrobenzene WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Pentachlorophenol WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	21.5	ug/L	---	28.6	010911DI/JS	14% - 176%	
WG68124-002	21.5	ug/L	LCSD	42.3	ug/L	65.*	---	010911DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MS	21.5	ug/L	---	28.6	010911DI/JS		(a)
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

* RPD above acceptance criteria - both LCS/LCSD recoveries within control limits.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Phenanthrene WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Phenol WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	75.0	ug/L	LCS	32.4	ug/L	---	43.1	010911DI/JS	5% - 112%	
WG68124-002	32.4	ug/L	LCSD	13.4	ug/L	83.*	---	010911DI/JS	Max 40 RPD	
Spike Value	75.0	ug/L	MS	32.4	ug/L	---	43.1	010911DI/JS	(a)	
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Pyrene WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	
Spike Value	50.0	ug/L	LCS	38.3	ug/L	---	76.6	010911DI/JS	52% - 115%	
WG68124-002	38.3	ug/L	LCSD	38.4	ug/L	0.26	---	010911DI/JS	Max 40 RPD	
Spike Value	50.0	ug/L	MS	38.3	ug/L	---	76.6	010911DI/JS	(a)	
Sample Spiked:	L89444-010	0	ug/L							
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Pyridine WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: Safrole WG68124 **EPA Method 8270**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

Analyte: 1,1,1,2-Tetrachloroethane WG68271 **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

* RPD above acceptance criteria - both LCS/LCSD recoveries within control limits.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 1,1,1-Trichloroethane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	27.8	ug/L	---	111.	010914HG	30% - 165%	
WG68271-001	27.8	ug/L	LCSDGCMS	26.8	ug/L	3.4	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	26.9	ug/L	---	107.	010915HG	30% - 165%	
WG68271-003	26.9	ug/L	LFBD	26.1	ug/L	2.9	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	29.5	ug/L	---	118.	010915HG		(a)
Sample Spiked:	L89479-002		0		ug/L					

Analyte: 1,1,2,2-Tetrachloroethane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,1,2-Trichloroethane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,1-Dichloroethane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
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Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 1,1-Dichloroethene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	26.3	ug/L	---	105.	010914HG	20% - 170%	
WG68271-001	26.3	ug/L	LCSDGCMS	25.5	ug/L	2.9	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	24.3	ug/L	---	97.2	010915HG	20% - 170%	
WG68271-003	24.3	ug/L	LFBD	23.8	ug/L	2.0	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	26.7	ug/L	---	107.	010915HG		(a)
Sample Spiked:	L89479-002		0		ug/L					

Analyte: 1,1-Dichloropropene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,2,3-Trichloropropane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,2,4-Trichlorobenzene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,2-Dichlorobenzene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 1,2-Dichloroethane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	24.1	ug/L	---	96.5	010914HG	15% - 175%	
WG68271-001	24.1	ug/L	LCSDGCMS	24.4	ug/L	1.1	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	24.4	ug/L	---	97.6	010915HG	15% - 175%	
WG68271-003	24.4	ug/L	LFBD	25.1	ug/L	2.9	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	27.5	ug/L	---	110.	010915HG		(a)
Sample Spiked:	L89479-002		0		ug/L					

Analyte: 1,2-Dichloropropane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,3-Dichlorobenzene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,3-Dichloropropane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 1,4-Dichloro-2-Butene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 1,4-Dichlorobenzene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	30.6	ug/L	---	122.	010914HG	15% - 170%	
WG68271-001	30.6	ug/L	LCSDGCMS	34.9	ug/L	13.	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	26.4	ug/L	---	106.	010915HG	15% - 170%	
WG68271-003	26.4	ug/L	LFBD	29.8	ug/L	12.	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	0.33J	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	31.8	ug/L	---	127.	010915HG		(a)

Sample Spiked: L89479-002 0 ug/L

Analyte: 2,2-Dichloropropane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 2-Hexanone **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Acetone **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Acetonitrile **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Acrolein **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
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Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Acrylonitrile WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Allyl Chloride WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Benzene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	25.8	ug/L	---	103.	010914HG	30% - 165%	
WG68271-001	25.8	ug/L	LCSDGCMS	25.6	ug/L	1.1	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	24.7	ug/L	---	98.8	010915HG	30% - 165%	
WG68271-003	24.7	ug/L	LFBD	24.6	ug/L	0.53	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	26.3	ug/L	---	105.	010915HG		(a)
Sample Spiked:	L89479-002		0	ug/L						

Analyte: Bromochloromethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Bromodichloromethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Bromoform WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

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Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Bromomethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Carbon Disulfide WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Carbon Tetrachloride WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	21.4	ug/L	---	85.7	010914HG	30% - 165%	
WG68271-001	21.4	ug/L	LCSDGCMS	17.8	ug/L	19.	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	21.4	ug/L	---	85.4	010915HG	30% - 165%	
WG68271-003	21.4	ug/L	LFBD	20.7	ug/L	3.2	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	24.4	ug/L	---	97.6	010915HG		(a)
Sample Spiked:	L89479-002		0		ug/L					

Analyte: Chlorobenzene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Chloroethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Chloroform WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
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Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Chloromethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Chloroprene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: cis-1,2-Dichloroethene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: cis-1,3-Dichloropropene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Dibromochloropropane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Dibromochloromethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Dibromomethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Dichlorodifluoromethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Ethylene dibromide WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Ethylbenzene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Ethyl Methacrylate WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Iodomethane WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Isobutyl Alcohol WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Methacrylonitrile WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 2-Butanone(MEK) WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 4-Methyl-2-Pentanone(MIBK WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Methyl Methacrylate WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Methylene Chloride WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	1.3J	ug/L	---	---	010914HG	< RL	

Analyte: Naphthalene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Propionitrile WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Styrene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Tetrachloroethene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Toluene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: trans-1,2-Dichloroethene WG68271 EPA 8260

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: trans-1,3-Dichloropropene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Trichloroethene **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	28.4	ug/L	---	114.	010914HG	25% - 160%	
WG68271-001	28.4	ug/L	LCSDGCMS	28.2	ug/L	0.85	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	28.3	ug/L	---	113.	010915HG	25% - 160%	
WG68271-003	28.3	ug/L	LFBD	28.4	ug/L	0.46	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	30.5	ug/L	---	122.	010915HG		(a)
Sample Spiked:	L89479-002		0		ug/L					

Analyte: Trichlorofluoromethane **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Vinyl Acetate **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Vinyl Chloride **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	25.0	ug/L	LCSGCMS	25.4	ug/L	---	101.	010914HG	.5%	200%
WG68271-001	25.4	ug/L	LCSDGCMS	24.2	ug/L	4.8	---	010914HG	Max 40 RPD	
Spike Value	25.0	ug/L	LFB	24.4	ug/L	---	97.5	010915HG	.5%	200%
WG68271-003	24.4	ug/L	LFBD	23.6	ug/L	3.2	---	010915HG	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	
Spike Value	25.0	ug/L	MSGCMS	25.5	ug/L	---	102.	010915HG		(a)
Sample Spiked:	L89479-002		0		ug/L					

Analyte: Xylenes (m+p) **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: Xylenes (ortho) **WG68271** **EPA 8260**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010914HG	< RL	

Analyte: 2,4,5-T **WG68245** **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	

Analyte: 2,4,5-TP Silvex **WG68245** **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	2.5	ug/L	LCSGC	2.2	ug/L	---	89.6	010917SM	54%	154%
WG68245-001	2.2	ug/L	LCSDGC	2.0	ug/L	11.	---	010917SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	
Spike Value	2.5	ug/L	MSGC	2.1	ug/L	---	84.8	010917SM		(a)
Sample Spiked:	L89444-010		0		ug/L					

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 2,4-D WG68245 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	5.0	ug/L	LCSGC	4.6	ug/L	---	91.9	010917SM	48% - 146%	
WG68245-001	4.6	ug/L	LCSDGC	4.6	ug/L	0.96	---	010917SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	
Spike Value	5.0	ug/L	MSGC	4.9	ug/L	---	97.6	010917SM		(a)
Sample Spiked:	L89444-010		0	ug/L						

Analyte: 2,4-DB WG68245 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	

Analyte: Dalapon WG68245 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	

Analyte: Dicamba WG68245 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	

Analyte: Dichlorprop WG68245 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	

Analyte: Dinoseb WG68245 **EPA Method 8150**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	5.0	ug/L	LCSGC	3.6	ug/L	---	72.9	010917SM	70% - 130%	
WG68245-001	3.6	ug/L	LCSDGC	3.9	ug/L	6.2	---	010917SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010917SM	< RL	
Spike Value	5.0	ug/L	MSGC	4.5	ug/L	---	89.3	010917SM		(a)
Sample Spiked:	L89444-010		0	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

Ida Walker

ESB Project Reviewer

E.S. BABCOCK & SONS, INC.
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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Antimony **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.5	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	25.0	ug/L	---	99.8	010913DA		(a)
WG68154-003	25.0	ug/L	**MSDICPMS**	23.8	ug/L	5.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.070	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.3	ug/L	---	96.6	010913DA		(a)
WG68154-007	24.3	ug/L	**MSDICPMS**	24.5	ug/L	0.93	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.13	ug/L						

Analyte: Arsenic **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.3	ug/L	---	105.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	28.9	ug/L	---	115.	010913DA		(a)
WG68154-003	28.9	ug/L	**MSDICPMS**	27.2	ug/L	6.2	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.254	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.6	ug/L	---	106.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	27.2	ug/L	---	107.	010913DA		(a)
WG68154-007	27.2	ug/L	**MSDICPMS**	27.5	ug/L	0.77	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.52	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Barium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.6	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	194.	ug/L	---	112.	010913DA		(a)
WG68154-003	194.	ug/L	**MSDICPMS**	189.	ug/L	3.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		166.42217 ug/L							
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.9	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	119.	ug/L	---	112.	010913DA		(a)
WG68154-007	119.	ug/L	**MSDICPMS**	116.	ug/L	2.2	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		91	ug/L						

Analyte: Beryllium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.5	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	30.8	ug/L	---	123.	010913DA		(a)
WG68154-003	30.8	ug/L	**MSDICPMS**	28.2	ug/L	8.6	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.029	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	28.6	ug/L	---	114.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	26.0	ug/L	---	104.	010913DA		(a)
WG68154-007	26.0	ug/L	**MSDICPMS**	27.0	ug/L	3.9	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.032	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Cadmium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.5	ug/L	---	106.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.5	ug/L	---	97.7	010913DA		(a)
WG68154-003	24.5	ug/L	**MSDICPMS**	23.6	ug/L	3.7	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.040	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.6	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.0	ug/L	---	95.8	010913DA		(a)
WG68154-007	24.0	ug/L	**MSDICPMS**	24.1	ug/L	0.55	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.035	ug/L						

Analyte: Total Chromium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.2	ug/L	---	101.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	28.3	ug/L	---	105.	010913DA		(a)
WG68154-003	28.3	ug/L	**MSDICPMS**	28.1	ug/L	0.98	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		2.2	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	28.4	ug/L	---	113.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	26.3	ug/L	---	102.	010913DA		(a)
WG68154-007	26.3	ug/L	**MSDICPMS**	26.6	ug/L	1.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.72	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Cobalt **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.6	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.9	ug/L	---	97.7	010913DA		(a)
WG68154-003	24.9	ug/L	**MSDICPMS**	24.6	ug/L	1.3	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.52	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.6	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.9	ug/L	---	97.9	010913DA		(a)
WG68154-007	24.9	ug/L	**MSDICPMS**	25.2	ug/L	1.2	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.42	ug/L						

Analyte: Copper **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.9	ug/L	---	104.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	25.5	ug/L	---	93.1	010913DA		(a)
WG68154-003	25.5	ug/L	**MSDICPMS**	25.0	ug/L	2.0	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		2.2	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.1	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.0	ug/L	---	92.7	010913DA		(a)
WG68154-007	24.0	ug/L	**MSDICPMS**	24.2	ug/L	0.98	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.8	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Lead **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.9	ug/L	---	104.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.7	ug/L	---	95.9	010913DA		(a)
WG68154-003	24.7	ug/L	**MSDICPMS**	24.5	ug/L	0.90	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.7	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.5	ug/L	---	110.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.0	ug/L	---	95.8	010913DA		(a)
WG68154-007	24.0	ug/L	**MSDICPMS**	24.0	ug/L	0.11	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.017	ug/L						

Analyte: Mercury **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	2.5	ug/L	**LCSICPMS**	2.3	ug/L	---	90.1	010913DA	80% - 120%	
Spike Value	2.5	ug/L	**MSICPMS**	2.2	ug/L	---	86.9	010913DA		(a)
WG68154-003	2.2	ug/L	**MSDICPMS**	2.2	ug/L	0.79	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.027	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	2.5	ug/L	**LCSICPMS**	2.5	ug/L	---	98.2	010913DA	80% - 120%	
Spike Value	2.5	ug/L	**MSICPMS**	2.1	ug/L	---	82.2	010913DA		(a)
WG68154-007	2.1	ug/L	**MSDICPMS**	2.2	ug/L	4.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.057	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Nickel **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.4	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	27.9	ug/L	---	96.5	010913DA		(a)
WG68154-003	27.9	ug/L	**MSDICPMS**	26.9	ug/L	3.8	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		3.8	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.2	ug/L	---	109.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	26.2	ug/L	---	94.8	010913DA		(a)
WG68154-007	26.2	ug/L	**MSDICPMS**	26.2	ug/L	0.098	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		2.5	ug/L						

Analyte: Selenium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	32.1	ug/L	---	122.	010913DA		(a)
WG68154-003	32.1	ug/L	**MSDICPMS**	30.8	ug/L	4.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		1.6	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.3	ug/L	---	109.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	29.3	ug/L	---	115.	010913DA		(a)
WG68154-007	29.3	ug/L	**MSDICPMS**	29.6	ug/L	1.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.444	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Silver **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.4	ug/L	---	102.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	22.7	ug/L	---	90.2	010913DA		(a)
WG68154-003	22.7	ug/L	**MSDICPMS**	21.7	ug/L	4.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.13	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	22.3	ug/L	---	89.2	010913DA		(a)
WG68154-007	22.3	ug/L	**MSDICPMS**	22.9	ug/L	2.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		-0.00	ug/L						

Analyte: Thallium **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	25.4	ug/L	---	101.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	23.5	ug/L	---	93.8	010913DA		(a)
WG68154-003	23.5	ug/L	**MSDICPMS**	23.3	ug/L	0.54	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		0.024	ug/L						
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.9	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	23.5	ug/L	---	93.9	010913DA		(a)
WG68154-007	23.5	ug/L	**MSDICPMS**	23.6	ug/L	0.33	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		0.018	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Tin WG68154 EPA 6020

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.7	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	25.5	ug/L	---	102.	010913DA		(a)
WG68154-003	25.5	ug/L	**MSDICPMS**	24.4	ug/L	4.5	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		-0.00	ug/L						
Blank	0.000	ug/L	**MB**	0.0	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	27.7	ug/L	---	111.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	24.5	ug/L	---	98.1	010913DA		(a)
WG68154-007	24.5	ug/L	**MSDICPMS**	24.8	ug/L	1.1	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		-0.00	ug/L						

Analyte: Vanadium WG68154 EPA 6020

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	24.3	ug/L	---	97.4	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	62.3	ug/L	---	96.7	010913DA		(a)
WG68154-003	62.3	ug/L	**MSDICPMS**	65.0	ug/L	4.3	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		38.11766	ug/L						
Blank	0.000	ug/L	**MB**	0.34J	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.9	ug/L	---	108.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	27.2	ug/L	---	99.7	010913DA		(a)
WG68154-007	27.2	ug/L	**MSDICPMS**	27.4	ug/L	0.56	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		2.3	ug/L						

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Zinc **WG68154** **EPA 6020**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	**MB**	4.4J	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	26.8	ug/L	---	107.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	46.3	ug/L	---	95.2	010913DA		(a)
WG68154-003	46.3	ug/L	**MSDICPMS**	46.0	ug/L	0.74	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89362-004		22.49143 ug/L							
Blank	0.000	ug/L	**MB**	ND	ug/L	---	---	010913DA	< RL	
Spike Value	25.0	ug/L	**LCSICPMS**	28.6	ug/L	---	114.	010913DA	80% - 120%	
Spike Value	25.0	ug/L	**MSICPMS**	30.0	ug/L	---	98.1	010913DA		(a)
WG68154-007	30.0	ug/L	**MSDICPMS**	29.9	ug/L	0.43	---	010913DA	Max 20 RPD	(b)
Sample Spiked:	L89444-007		5.5 ug/L							

Analyte: Calcium **WG68155** **EPA 6010**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	0.14J	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	**LCSICP**	20.0	mg/L	---	99.8	010914LT	85% - 115%	
Spike Value	20.0	mg/L	**MSICP**	127.	mg/L	---	102.	010914LT		(a)
WG68155-003	127.	mg/L	**MSDICP**	126.	mg/L	0.71	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89362-004		106.2111968mg/L							
Blank	0.000	mg/L	**MB**	0.15J	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	**LCSICP**	20.3	mg/L	---	102.	010914LT	85% - 115%	
Spike Value	20.0	mg/L	**MSICP**	97.8	mg/L	---	82.6	010914LT		(a)
WG68155-007	97.8	mg/L	**MSDICP**	98.2	mg/L	0.38	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89444-007		81.3136645mg/L							

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Magnesium **WG68155** **EPA 6010**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	LCSICP	19.6	mg/L	---	97.8	010914LT	85% - 115%	
Spike Value	20.0	mg/L	MSICP	77.7	mg/L	---	97.5	010914LT		(a)
WG68155-003	77.7	mg/L	MSDICP	77.5	mg/L	0.33	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89362-004		58.24695161mg/L							
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010914LT	< RL	
Spike Value	20.0	mg/L	LCSICP	19.8	mg/L	---	99.0	010914LT	85% - 115%	
Spike Value	20.0	mg/L	MSICP	45.2	mg/L	---	92.8	010914LT		(a)
WG68155-007	45.2	mg/L	MSDICP	45.3	mg/L	0.21	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89444-007		26.6639795mg/L							

Analyte: Sodium **WG68155** **EPA 6010**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.13J	mg/L	---	---	010914LT	< RL	
Spike Value	40.0	mg/L	LCSICP	40.5	mg/L	---	101.	010914LT	85% - 115%	
Spike Value	40.0	mg/L	MSICP	179.	mg/L	---	104.	010914LT		(a)
WG68155-003	179.	mg/L	MSDICP	177.	mg/L	1.2	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89362-004		137.2655616mg/L							
Blank	0.000	mg/L	MB	0.14J	mg/L	---	---	010914LT	< RL	
Spike Value	40.0	mg/L	LCSICP	40.7	mg/L	---	102.	010914LT	85% - 115%	
Spike Value	40.0	mg/L	MSICP	103.	mg/L	---	94.6	010914LT		(a)
WG68155-007	103.	mg/L	MSDICP	103.	mg/L	0.17	---	010914LT	Max 20 RPD	(b)
Sample Spiked:	L89444-007		65.43532816mg/L							

Analyte: Total Dissolved Solids **WG68021** **EPA 160.1**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	2.0J	mg/L	---	---	010907BP	< RL	
Spike Value	746.	mg/L	LCS	721.	mg/L	---	96.6	010907BP	90% - 115%	
L89415-002	776.	mg/L	DUP	768.	mg/L	1.0	---	010907BP	Max 20 RPD	(b)
L89444-007	584.	mg/L	DUP	589.	mg/L	0.85	---	010907BP	Max 20 RPD	(b)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Total Dissolved Solids **WG68040** **EPA 160.1**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010910KLT	< RL	
Spike Value	746.	mg/L	**LCS**	746.	mg/L	---	100.	010910KLT	90% - 115%	
L89403-005	816.	mg/L	**DUP**	812.	mg/L	0.49	---	010910KLT	Max 20 RPD (b)	
L89444-010	725.	mg/L	**DUP**	746.	mg/L	2.9	---	010910KLT	Max 20 RPD (b)	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Chloride **WG68022** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.48J	mg/L	---	---	010908DU	< RL	
Blank	0.000	mg/L	MB	0.19J	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	10.4	mg/L	---	104.	010908DU	80% - 120%	
L89444-010	115.	mg/L	DUP	114.	mg/L	0.82	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	136.	mg/L	---	104.	010908DU		(a)
Blank	0.000	mg/L	MB	0.27J	mg/L	---	---	010908DU	< RL	
L89450-005	54.0	mg/L	DUP	52.7	mg/L	2.4	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	73.7	mg/L	---	98.4	010908DU		(a)
Blank	0.000	mg/L	MB	0.15J	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	10.1	mg/L	---	101.	010908DU	80% - 120%	
L89462-002	89.8	mg/L	DUP	87.8	mg/L	2.3	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	109.	mg/L	---	94.8	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Blank	0.000	mg/L	MB	0.22J	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	10.	mg/L	---	99.5	010908DU	80% - 120%	
L89471-005	12.5	mg/L	DUP	12.0	mg/L	4.1	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	28.8	mg/L	---	81.5	010908DU		(a)
Blank	0.000	mg/L	MB	0.19J	mg/L	---	---	010908DU	< RL	
L89487-001	126.	mg/L	DUP	128.	mg/L	1.6	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	149.	mg/L	---	115.	010908DU		(a)
Blank	0.000	mg/L	MB	0.19J	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	10.0	mg/L	---	100.	010908DU	80% - 120%	
L89374-009	0.87	mg/L	DUP	0.99	mg/L	13.	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	21.3	mg/L	---	102.	010908DU		(a)
Blank	0.000	mg/L	MB	0.56J	mg/L	---	---	010908DU	< RL	
L89374-029	4.6	mg/L	DUP	4.5	mg/L	0.84	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	25.0	mg/L	---	102.	010908DU		(a)
Blank	0.000	mg/L	MB	0.14J	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	10.	mg/L	---	99.6	010908DU	80% - 120%	
L89374-049	4.3	mg/L	DUP	4.5	mg/L	3.2	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	21.4	mg/L	---	85.3	010908DU		(a)
Blank	0.000	mg/L	MB	0.21J	mg/L	---	---	010908DU	< RL	
L89374-069	18.8	mg/L	DUP	19.1	mg/L	1.3	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	36.0	mg/L	---	85.9	010908DU		(a)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Chloride **WG68131** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.11J	mg/L	---	---	010911KOS	< RL	
Blank	0.000	mg/L	MB	0.31J	mg/L	---	---	010911KOS	< RL	
Spike Value	10.0	mg/L	LCS	10.3	mg/L	---	103.	010911KOS	80% - 120%	
L89599-001	197.	mg/L	DUP	195.	mg/L	0.89	---	010911KOS	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	214.	mg/L	---	86.0	010911KOS		(a)
Blank	0.000	mg/L	MB	0.15J	mg/L	---	---	010911KOS	< RL	
Blank	0.000	mg/L	MB	0.13J	mg/L	---	---	010911KOS	< RL	
Spike Value	10.0	mg/L	LCS	9.9	mg/L	---	99.4	010911KOS	80% - 120%	
L89549-001	1.9	mg/L	DUP	1.7	mg/L	12.	---	010911KOS	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	20.4	mg/L	---	92.7	010911KOS		(a)
Blank	0.000	mg/L	MB	0.32J	mg/L	---	---	010911KOS	< RL	
L89559-001	12.4	mg/L	DUP	12.2	mg/L	1.7	---	010911KOS	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	29.4	mg/L	---	84.9	010911KOS		(a)
Blank	0.000	mg/L	MB	0.20J	mg/L	---	---	010911KOS	< RL	
Spike Value	10.0	mg/L	LCS	10.3	mg/L	---	103.	010911KOS	80% - 120%	
L89567-003	36.0	mg/L	DUP	36.7	mg/L	1.9	---	010911KOS	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	57.7	mg/L	---	108.	010911KOS		(a)
Blank	0.000	mg/L	MB	0.15J	mg/L	---	---	010911KOS	< RL	
L89581-001	55.1	mg/L	DUP	55.4	mg/L	0.45	---	010911KOS	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	76.9	mg/L	---	109.	010911KOS		(a)
Blank	0.000	mg/L	MB	0.11J	mg/L	---	---	010911KOS	< RL	
Spike Value	10.0	mg/L	LCS	10.7	mg/L	---	107.	010911KOS	80% - 120%	
L89530-003	68.4	mg/L	DUP	68.3	mg/L	0.19	---	010911KOS	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	89.9	mg/L	---	108.	010911KOS		(a)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Nitrate-Nitrogen **WG68022** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	0.010	mg/L	---	---	010908DU	< RL	
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	9.67	mg/L	---	96.7	010908DU	90% - 110%	
L89444-010	0.0	mg/L	DUP	0.17	mg/L	200 *	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.86	mg/L	---	93.0	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89450-005	18.4	mg/L	DUP	18.2	mg/L	0.76	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	20.0	mg/L	---	80.5	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	9.68	mg/L	---	96.8	010908DU	90% - 110%	
L89462-002	0.78	mg/L	DUP	0.83	mg/L	6.2	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	2.40	mg/L	---	81.0	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89465-001	1.95	mg/L	DUP	1.86	mg/L	4.7	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	3.73	mg/L	---	89.0	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	9.73	mg/L	---	97.3	010908DU	90% - 110%	
L89471-005	0.060	mg/L	DUP	0.040	mg/L	40.*	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.70	mg/L	---	82.0	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89487-001	0.53	mg/L	DUP	0.52	mg/L	1.9	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	2.22	mg/L	---	84.5	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	9.77	mg/L	---	97.7	010908DU	90% - 110%	
L89374-009	0.010	mg/L	DUP	0.040	mg/L	120 *	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.71	mg/L	---	85.0	010908DU		(a)
Blank	0.000	mg/L	MB	0.01J	mg/L	---	---	010908DU	< RL	
L89374-029	0.200	mg/L	DUP	0.31	mg/L	43.**	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.84	mg/L	---	82.0	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	10.0	mg/L	LCS	9.77	mg/L	---	97.7	010908DU	90% - 110%	
L89374-049	0.020	mg/L	DUP	0.050	mg/L	86.*	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.72	mg/L	---	85.0	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89374-069	0.0	mg/L	DUP	0.030	mg/L	200*	---	010908DU	Max 20 RPD	(b)
Spike Value	2.00	mg/L	MS	1.72	mg/L	---	86.0	010908DU		(a)

* RPD N/A; analyte concentration below RL.
* Analyte concentration below range for valid RPD determination.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Sulfate **WG68022** **EPA 9056**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Blank	0.000	mg/L	MB	0.16J	mg/L	---	---	010908DU	< RL	
Spike Value	30.0	mg/L	LCS	32.1	mg/L	---	107.	010908DU	90% - 115%	
L89444-010	213.	mg/L	DUP	211.	mg/L	0.91	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	234.	mg/L	---	108.	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89450-005	68.3	mg/L	DUP	67.3	mg/L	1.5	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	89.1	mg/L	---	104.	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	30.0	mg/L	LCS	32.2	mg/L	---	107.	010908DU	90% - 115%	
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89465-001	7.32	mg/L	DUP	6.68	mg/L	9.1	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	27.9	mg/L	---	103.	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	30.0	mg/L	LCS	31.7	mg/L	---	106.	010908DU	90% - 115%	
L89471-005	10.0	mg/L	DUP	8.50	mg/L	17.	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	29.5	mg/L	---	97.3	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	30.0	mg/L	LCS	31.3	mg/L	---	104.	010908DU	90% - 115%	
L89374-009	1.48	mg/L	DUP	1.55	mg/L	4.4	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	23.4	mg/L	---	110.	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89374-029	4.70	mg/L	DUP	4.41	mg/L	6.4	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	25.5	mg/L	---	104.	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
Spike Value	30.0	mg/L	LCS	31.5	mg/L	---	105.	010908DU	90% - 115%	
L89374-049	2.54	mg/L	DUP	2.63	mg/L	3.6	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	23.1	mg/L	---	103.	010908DU		(a)
Blank	0.000	mg/L	MB	ND	mg/L	---	---	010908DU	< RL	
L89374-069	16.1	mg/L	DUP	16.4	mg/L	1.5	---	010908DU	Max 20 RPD	(b)
Spike Value	20.0	mg/L	MS	37.6	mg/L	---	107.	010908DU		(a)

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

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Wet Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Sulfide **WG68035** **EPA 376.2**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	mg/L	**MB**	ND	mg/L	---	---	010907JD	< RL	
L89444-004	0.0	mg/L	**DUP**	0.0	mg/L	N/A	---	010907JD	Max 20 RPD (b)	
L89447-001	0.0	mg/L	**DUP**	0.0	mg/L	N/A	---	010907JD	Max 20 RPD (b)	

Analyte: Cyanide **WG68141** **EPA 9012**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.236	mg/L	**MS**	0.134	mg/L	---	*56.8	010914TF		(a)
WG68047-002	0.134	mg/L	**MSD**	0.126	mg/L	6.2	---	010914TF	Max 20 RPD (b)	
Sample Spiked:	L89362-004	0	mg/L							
Spike Value	0.118	mg/L	**LCS**	0.118	mg/L	---	100.	010914TF	70% - 130%	
Spike Value	0.118	mg/L	**MS**	0.093	mg/L	---	78.8	010914TF		(a)
WG68141-002	0.093	mg/L	**MSD**	0.092	mg/L	1.1	---	010914TF	Max 20 RPD (b)	
Sample Spiked:	L89410-002	0	mg/L							

* MS/MSD target range is 55% - 140%.
(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.
(b) Exceptions: Cyanide, Kjeldahl-Nitrogen and Suspended Solids: Max 30 RPD

Jeda Walker
ESB Project Reviewer

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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: 4,4'-DDD WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: 4,4'-DDE WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: 4,4'-DDT WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: a-BHC WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.050	ug/L	LCSGC	0.058	ug/L	---	116.	010913SM	37% - 137%	
WG68172-001	0.058	ug/L	LCSDGC	0.060	ug/L	3.4	---	010913SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	
Spike Value	0.050	ug/L	MSGC	0.041	ug/L	---	82.0	010913SM		(a)
Sample Spiked:	L89444-005		0	ug/L						

Analyte: Aldrin WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Aroclor 1016 WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Aroclor 1221 WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

E.S. BABCOCK & SONS, INC.
ESTABLISHED 1906

Environmental Laboratory Certification #1156
6100 Quail Valley Court Riverside, CA 92507-0704
P.O. Box 432 Riverside, CA 92502-0432
PH (909) 653-3351 FAX (909) 653-1662
e-mail: esbsales@aol.com
www.babcocklabs.com

Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Aroclor 1232 **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Aroclor 1242 **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Aroclor 1248 **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Aroclor 1254 **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Aroclor 1260 **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: b-BHC **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Chlordane **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: d-BHC **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

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e-mail: esbsales@aol.com
www.babcocklabs.com

Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Dieldrin **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.050	ug/L	LCSGC	0.049	ug/L	---	98.0	010913SM	25.6% - 155%	
WG68172-001	0.049	ug/L	LCSDGC	0.052	ug/L	5.9	---	010913SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	
Spike Value	0.050	ug/L	MSGC	0.032	ug/L	---	64.0	010913SM		(a)
Sample Spiked:	L89444-005		0	ug/L						

Analyte: Endosulfan I **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Endosulfan II **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Endosulfan Sulfate **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Endrin **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Endrin Aldehyde **WG68172** **EPA Method 8080**

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

E.S. BABCOCK & SONS, INC.
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Organic Chemistry - Batch QC

Log #: L89444
For Client: GeoLogic Associates
Date Rec'd: 09/07/2001
Lab Number: L89444-001 to -010
Date Printed: October 01, 2001

Analyte: Heptachlor WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Spike Value	0.050	ug/L	LCSGC	0.045	ug/L	---	90.0	010913SM	34% - 111%	
WG68172-001	0.045	ug/L	LCSDGC	0.049	ug/L	8.5	---	010913SM	Max 40 RPD	
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	
Spike Value	0.050	ug/L	MSGC	0.034	ug/L	---	62.6	010913SM		(a)
Sample Spiked:	L89444-005		0.002	ug/L						

Analyte: Heptachlor Epoxide WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Hexachlorocyclopentadiene WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Lindane WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Methoxychlor WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: Toxaphene WG68172 EPA Method 8080

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010913SM	< RL	

Analyte: 1,2,4,5-Tetrachlorobenzen WG68124 EPA Method 8270

Reference	Ref Value	Units	QC Type	Result	Units	RPD	%Rec	Batch Date	LCL	UCL
Blank	0.000	ug/L	MB	ND	ug/L	---	---	010911DI/JS	< RL	

(a) Target range same as LCS Control Limits. If outside range, matrix interference suspected.

BC Laboratories, Inc.

Chain of Custody Form

REC'D JAN 3 1 2001

04628

PLEASE COMPLETE: BCL QUOTE ID: Q-GLGCB-20001129

Page ____ of ____ (103)

Report To:
Client: Geologic Associates
Attn: Sarah Barrette
Street Address: 1360 Valley Vista Dr.
City, State, Zip: Diamond Bar, CA 91765
Phone: 909-860-3448 Fax:
Email Address:
Submittal #: 00-14001

Project #:
Project Name: Gregory Canyon
Project Code:
Sampler(s): Ben Salinas, Tony Ramirez

Comments: Any Questions Please call Sarah Barrette @ 858-451-1136
Used BAS D.I. water for Field Equipment Blanks.

Analysis Requested

Sample #	Description	Date Sampled	Time Sampled	Chloride, Sulfate, Nitrate (N), pH, TDS	Cam metals (except molybdenum) + Tl	8260 (SVOCs including organochlorine pesticides)	8260 (VOCs including volatile organics)	Cyanide, Sulfide	8151 (chlorinated herbicides)	8081 (organochlorine pesticides & PCBs)	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
# of Containers		12/5/00																
10	GLA-11 -1	12/5/00	1550	X	X	X	X	X	X	X	X			X				
10	GLA-13 -2	12/5/00	1105	X	X	X	X	X	X	X	X			X				
10	GLA-16 -3	12/5/00	0915	X	X	X	X	X	X	X	X			X				
1	Field Blank -4	12/5/00	—					X							X			Used BAS DI water
1	Equip. Blank -5	12/5/00	—					X							X			Used BAS DI water
1	Travel Blank -6 TB	12/5/00	—					X							X			

CHK BY DISTRIBUTION MABGSB SUB-OUT

SHORT HOLDING TIME: Cr^{+6} NO_2 NO_3 OP SS DO BOD MBAS C O I

Total Cations - Thallium not TI - Sb 6010 - not nec. to do *
Organics Sub 8260 & 2.1B - ask for Gregory list per MW + 9/14 12/1 (VB)

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

Report Drinking Waters on State Form? ☐ Yes ☐ No
Send Copy to State of CA? ☐ Yes ☐ No

Sample Disposal: ☐ Return to Client ☐ Disposal by lab ☐ Archive: Months____

Special Reporting: ☐ QC ☐ WIP ☐ Raw Data

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	12-5-00	16:28	[signature]	12/5/00	1629
2.	[signature]	12/6/00		[signature]	12-6-00	12:36
3.	[signature]	12-6-00	20:05	[signature]	12-6-00	2205

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page ___ Of ___

Submission #: 00-14001 | **Project Code:** | **TB Batch #**

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☒ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

REC'D JAN 3 1 2001

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID Blue Date/Time 12/6/00
Temperature: 3.7 °C 2235
Thermometer ID: #80 Analyst Init CFord
Emissivity .95
Container Pipe

Ice Chest ID Blue Date/Time 12/6/00
Temperature: 3.9 °C 2240
Thermometer ID: #80 Analyst Init CFl
Emissivity .85
Container QtAmber

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6 (6TB)	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL	1	1	1																					
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS	1	1	1																					
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE	1	1	1																					
PT NITROGEN FORMS																								
PT TOTAL SULFIDE	1	1	1																					
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK						1																		
40ml VOA VIAL	2	2	2	1	1																			
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504	CFORD 12/6/00																							
QT EPA 508/608/8080	~~1~~	~~1~~	~~1~~										1	1	1									
QT EPA 515.1/8150	~~1~~	~~1~~	~~1~~										1	1	1									
QT EPA [redacted] 625/8270	~~2~~	~~2~~	~~2~~										2	2	2									
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CFl Date/Time: 12/6/00 2235

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC Laboratories, Inc.

REC'D JAN 3 1 2001

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/08/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sampling Date/Time: 12/05/2000 @ 15:50
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Total Calcium	90.	mg/L	0.050	0.02	EPA-6010
Total Magnesium	27.	mg/L	0.050	0.02	EPA-6010
Total Sodium	91.	mg/L	0.50	0.07	EPA-6010
Sulfate	82.	mg/L	1.0	0.25	EPA-300.0
Chloride	177.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	None Detected	mg/L	0.1	0.020	EPA-300.0
pH	7.61	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	763.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9010
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/08/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sampling Date/Time: 12/05/2000 @ 11:05
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Total Calcium	67.	mg/L	0.050	0.02	EPA-6010
Total Magnesium	39.	mg/L	0.050	0.02	EPA-6010
Total Sodium	110.	mg/L	0.50	0.07	EPA-6010
Sulfate	119.	mg/L	1.0	0.25	EPA-300.0
Chloride	127.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	25.9	mg/L	0.2	0.040	EPA-300.0
pH	7.49	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	885.	mg/L	50.	30.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9010
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/08/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sampling Date/Time: 12/05/2000 @ 09:15
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Total Calcium	76.	mg/L	0.050	0.02	EPA-6010
Total Magnesium	36.	mg/L	0.050	0.02	EPA-6010
Total Sodium	72.	mg/L	0.50	0.07	EPA-6010
Sulfate	109.	mg/L	1.0	0.25	EPA-300.0
Chloride	105.	mg/L	0.5	0.090	EPA-300.0
Nitrate as N	6.24	mg/L	0.1	0.020	EPA-300.0
pH	7.50	pH Units	-.	-.	EPA-9040
Total Dissolved Solids @ 180 C	690.	mg/L	40.	20.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9010
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-2MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK

Constituents	Results	Units	P.Q.L.	M.D.L.	Method
Total Calcium	None Detected	mg/L	0.050	0.014	EPA-6010
Total Magnesium	None Detected	mg/L	0.050	0.016	EPA-6010
Total Sodium	None Detected	mg/L	0.50	0.064	EPA-6010
Sulfate	None Detected	mg/L	1.0	0.25	EPA-300.0
Chloride	None Detected	mg/L	0.5	0.09	EPA-300.0
Nitrate as N	None Detected	mg/L	0.1	0.02	EPA-300.0
Total Dissolved Solids @ 180 C	None Detected	mg/L	10.	5.	EPA-160.1
Total Cyanide	None Detected	mg/L	0.02	0.01	EPA-9010
Total Sulfide	None Detected	mg/L	0.1	0.05	EPA-9030

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/09/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sampling Date/Time: 12/05/2000 @ 15:50
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Antimony		None Detected	µg/L	100.	8.	EPA-6010
Total Arsenic		4.	µg/L	2.	0.7	EPA-7060
Total Barium	*02	2.	µg/L	100.	0.9	EPA-6010
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Total Copper	*02	4.	µg/L	10.	3.	EPA-6010
Total Lead	*02	0.7	µg/L	5.	0.4	EPA-7421
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Total Nickel	*02	4.	µg/L	10.	3.	EPA-6010
Total Selenium	*01	None Detected	µg/L	4.	3.	EPA-7740
Total Silver		None Detected	µg/L	10.	3.	EPA-6010
Total Thallium	*02	30.	µg/L	100.	20.	EPA-6010
Total Vanadium		None Detected	µg/L	10.	3.	EPA-6010
Total Zinc	*02	9.1	µg/L	50.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/09/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sampling Date/Time: 12/05/2000 @ 11:05
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Antimony		None Detected	µg/L	100.	8.	EPA-6010
Total Arsenic		2.	µg/L	2.	0.7	EPA-7060
Total Barium	*02	20.	µg/L	100.	0.9	EPA-6010
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Total Copper		None Detected	µg/L	10.	3.	EPA-6010
Total Lead	*02	0.6	µg/L	5.	0.4	EPA-7421
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010
Total Selenium	*01	None Detected	µg/L	4.	3.	EPA-7740
Total Silver		None Detected	µg/L	10.	3.	EPA-6010
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010
Total Vanadium		20.	µg/L	10.	3.	EPA-6010
Total Zinc	*02	21.	µg/L	50.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*01 = Note: PQL's and MDL's are raised due to matrix interferences.
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/09/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sampling Date/Time: 12/05/2000 @ 09:15
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Antimony	*02	10.	µg/L	100.	8.	EPA-6010
Total Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060
Total Barium	*02	61.	µg/L	100.	0.9	EPA-6010
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010
Total Chromium	*02	5.0	µg/L	10.	4.	EPA-6010
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010
Total Copper	*02	4.0	µg/L	10.	3.	EPA-6010
Total Lead	*02	0.5	µg/L	5.	0.4	EPA-7421
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010
Total Selenium	*01	None Detected	µg/L	4.	3.	EPA-7740
Total Silver		None Detected	µg/L	10.	3.	EPA-6010
Total Thallium	*02	20.	µg/L	100.	20.	EPA-6010
Total Vanadium		30.	µg/L	10.	3.	EPA-6010
Total Zinc	*02	7.3	µg/L	50.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-1MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Antimony		None Detected	µg/L	100.	7.4	EPA-6010
Total Arsenic		None Detected	µg/L	2.	0.68	EPA-7060
Total Barium		None Detected	µg/L	100.	0.81	EPA-6010
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Total Cadmium		None Detected	µg/L	10.	3.5	EPA-6010
Total Chromium		None Detected	µg/L	10.	3.2	EPA-6010
Total Cobalt		None Detected	µg/L	50.	1.4	EPA-6010
Total Copper		None Detected	µg/L	10.	2.1	EPA-6010
Total Lead		None Detected	µg/L	5.	0.40	EPA-7421
Total Mercury		None Detected	µg/L	0.2	0.1	EPA-7470
Total Nickel		None Detected	µg/L	10.	2.1	EPA-6010
Total Selenium		None Detected	µg/L	2.	0.58	EPA-7740
Total Silver		None Detected	µg/L	10.	2.7	EPA-6010
Total Thallium	*02	27.8	µg/L	100.	16.	EPA-6010
Total Vanadium		None Detected	µg/L	10.	2.1	EPA-6010
Total Zinc	*02	7.9	µg/L	50.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/10/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 15:50
Date Extracted: 12/07/2000
Date Analyzed: 12/27/2000 @ 20:06

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	81.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/10/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 11:05
Date Extracted: 12/07/2000
Date Analyzed: 12/27/2000 @ 20:31

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	87.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/10/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 09:15
Date Extracted: 12/07/2000
Date Analyzed: 12/27/2000 @ 20:57

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	98.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-4MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/07/2000
Date Analyzed: 12/27/2000 @ 20:06
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	90.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 15:50
Date Extracted: 12/07/2000
Date Analyzed: 12/15/2000 @ 11:30

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	87.	%	49-122	
Surrogates				
Decachlorobiphenyl	92.	%	52-125	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 11:05
Date Extracted: 12/07/2000
Date Analyzed: 12/15/2000 @ 17:31

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	81.	%	49-122	
Surrogates				
Decachlorobiphenyl	84.	%	52-125	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 09:15
Date Extracted: 12/07/2000
Date Analyzed: 12/15/2000 @ 17:59

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	0.0076	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	92.	%	49-122	
Surrogates				
Decachlorobiphenyl	98.	%	52-125	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Project Number: GREGORY CANYON
Sample ID: GLA-11
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 15:50
Date Extracted: 12/07/2000
Date Analyzed: 12/14/2000 @ 08:15

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Sample Description: GREGORY CANYON, GLA-11, 12/05/2000 @ 15:50, BETH SALINAS, TONY RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Sample Description: GREGORY CANYON, GLA-11, 12/05/2000 @ 15:50, BETH SALINAS, TONY RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	57.	21-100
Phenol-d5	55.	10-94
Nitrobenzene-d5	87.	35-114
2-Fluorobiphenyl	76.	43-116
2,4,6-Tribromophenol	85.	10-123
d14-Terphenyl	61.	33-141

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-1

Sample Description: GREGORY CANYON, GLA-11, 12/05/2000 @ 15:50, BETH SALINAS, TONY RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Project Number: GREGORY CANYON
Sample ID: GLA-13
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 11:05
Date Extracted: 12/07/2000
Date Analyzed: 12/14/2000 @ 20:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	0.99	µg/L	5.	0.325	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Sample Description: GREGORY CANYON, GLA-13, 12/05/2000 @ 11:05, BETH SALINAS, TONY RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Sample Description: GREGORY CANYON, GLA-13, 12/05/2000 @ 11:05, BETH SALINAS, TONY RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	67.	21-100
Phenol-d5	60.	10-94
Nitrobenzene-d5	91.	35-114
2-Fluorobiphenyl	79.	43-116
2,4,6-Tribromophenol	99.	10-123
d14-Terphenyl	64.	33-141

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Base Neutral and Acid Extractables
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(EPA Method 8270)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-2

Sample Description: GREGORY CANYON, GLA-13, 12/05/2000 @ 11:05, BETH SALINAS, TONY RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
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GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Project Number: GREGORY CANYON
Sample ID: GLA-16
Sample Matrix: Water
Sample Collected By: BETH SALINAS, TONY RAMIREZ

Date Collected: 12/05/2000 @ 09:15
Date Extracted: 12/07/2000
Date Analyzed: 12/14/2000 @ 21:29

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Sample Description: GREGORY CANYON, GLA-16, 12/05/2000 @ 09:15, BETH SALINAS, TONY RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Sample Description: GREGORY CANYON, GLA-16, 12/05/2000 @ 09:15, BETH SALINAS, TONY RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	63.	21-100
Phenol-d5	59.	10-94
Nitrobenzene-d5	91.	35-114
2-Fluorobiphenyl	79.	43-116
2,4,6-Tribromophenol	96.	10-123
d14-Terphenyl	64.	33-141

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/06/2000
Laboratory No.: 00-14001-3

Sample Description: GREGORY CANYON, GLA-16, 12/05/2000 @ 09:15, BETH SALINAS, TONY RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-5MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/07/2000
Date Analyzed: 12/14/2000 @ 08:15

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-5MB

Sample Description: GREGORY CANYON, METHOD BLANK

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-5MB

Sample Description: GREGORY CANYON, METHOD BLANK

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	68.	21-100
Phenol-d5	53.	10-94
Nitrobenzene-d5	94.	35-114
2-Fluorobiphenyl	82.	43-116
2,4,6-Tribromophenol	100.	10-123
d14-Terphenyl	67.	33-141

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-5MB

Sample Description: GREGORY CANYON, METHOD BLANK

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/06/2000
Laboratory No.: 00-14001-3MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/07/2000
Date Analyzed: 12/15/2000 @ 11:30

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	109.	%	49-122	
Surrogates				
Decachlorobiphenyl	113.	%	52-125	

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.
4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

SUBCONTRACT CHAIN OF CUSTODY

0012132

Subcontract Lab: ZALCO LABORATORIES (ZLCLB)
4309 ARMOUR AVE.
BAKERSFIELD, CA 93308
Attn: RHONDA HAYES
Phone: 661-395-0539
FAX: 661-395-3069

Report To: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn: Michelle Buttram
Phone: 661-327-4911

Bill To: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn: Accounts Payable

TAT: Normal

Sample ID	Sample Matrix	Sample Date	Sample Time	Requested Tests 01	
00-14001-1	Water	12/05/2000	15:50	X	2 voas
00-14001-2	Water	12/05/2000	11:05	X	↓
00-14001-3	Water	12/05/2000	09:15	X	↓
00-14001-4	Blank Wate	12/05/2000		X	1 voa
00-14001-5	Blank Wate	12/05/2000		X	
00-14001-6TB	Blank Wate	12/05/2000		X	↓

Requested Tests Legend

01 GC-8260-WATER

Note: Please do not subcontract any test without obtaining approval from an authorized representative of BC laboratories.

Comments: LIST FOR GREGORY CANYON AS PER JOHN HATZMAN

		Date/Time	
Relinquished By:	[illegible]	PC	12/8/00 1320
Received By:	[illegible]	12-8-00	1330
Relinquished By:	[illegible]	12-8-00	1337
Received By:	[illegible]	12/8/00	1337
Relinquished By:			
Received By:			
Relinquished By:			
Received By:			

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-1
Sampled by Client

Laboratory No: 0012132-1
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 15:50

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 15:11:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

DEC 2 2 2000

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-1
Sampled by Client

Laboratory No: 0012132-1
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 15:50

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 15:11:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
µg/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-1
Sampled by Client

Laboratory No: 0012132-1
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 15:50

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 15:11:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-2
Sampled by Client

Laboratory No: 0012132-2
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 11:05

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 15:47:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-2
Sampled by Client

Laboratory No: 0012132-2
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 11:05

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 15:47:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-2
Sampled by Client

Laboratory No: 0012132-2
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 11:05

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 15:47:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-3
Sampled by Client

Laboratory No: 0012132-3
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 09:15

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 16:24:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-3
Sampled by Client

Laboratory No: 0012132-3
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 09:15

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 16:24:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
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DLR : Detection Limit for Reporting Purposes

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(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-3
Sampled by Client

Laboratory No: 0012132-3
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled : 09:15

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 16:24:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

This report is furnished for the exclusive use of our Customer and applies only to the samples tested. Zalco is not responsible for report alteration or detachment.

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-4
Sampled by Client

Laboratory No: 0012132-4
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 14:34:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-4
Sampled by Client

Laboratory No: 0012132-4
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	21.6	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	0.58	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 14:34:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-4
Sampled by Client

Laboratory No: 0012132-4
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 14:34:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-5
Sampled by Client

Laboratory No: 0012132-5
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 10:22:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-5
Sampled by Client

Laboratory No: 0012132-5
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	28.6	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	0.58	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 10:22:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-5
Sampled by Client

Laboratory No: 0012132-5
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/14/00 10:22:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-6TB
Sampled by Client

Laboratory No: 0012132-6
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 11:33:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/04/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*WATER

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Total Calcium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Magnesium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Sodium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Sulfate	N.A.	12/07/2000	MMT	EPA-300.0	12/07/2000	MMT
Chloride	N.A.	12/07/2000	MMT	EPA-300.0	12/07/2000	MMT
Nitrate as N	N.A.	12/07/2000	MMT	EPA-300.0	12/07/2000	MMT
pH	N.A.	12/07/2000	NSC	EPA-9040	12/07/2000	NSC
Total Dissolved Solids @ 180 C	N.A.	12/08/2000	HPR	EPA-160.1	12/08/2000	HPR
Total Cyanide	EPA-9010	12/07/2000	MET	EPA-9010	12/11/2000	TDC
Total Sulfide	EPA-9030	12/11/2000	NSC	EPA-9030	12/11/2000	NSC

Quality Control Officer

Danette Bohm

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.
4100 Atlas Court * Bakersfield, CA 93308 * (661) 327-4911 * Fax (661) 327-1918 * www.bclabs.com

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14001-6TB
Sampled by Client

Laboratory No: 0012132-6
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/05/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 11:33:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/03/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*WATER

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Total Calcium	TOTAL-14001-1	90.37	99.39	101.6	103.4	10.00	10.00	mg/L	10.	2.	20	H MEAN	H MEAN	75 - 125
Total Magnesium	TOTAL-14001-1	26.91	29.60	37.21	37.98	10.00	10.00	mg/L	10.	2.	20	103.	111.	75 - 125
Total Sodium	TOTAL-14001-1	90.66	99.43	103.0	104.4	10.00	10.00	mg/L	9.	1.	20	H MEAN	H MEAN	75 - 125
Sulfate	13964-1	39.58	39.47	141.4	141.5	100.0	100.0	mg/L	0.	0.	10	102.	102.	80 - 120
Chloride	13964-1	22.72	22.90	124.4	124.3	100.0	100.0	mg/L	1.	0.	10	102.	102.	80 - 120
Nitrate as N	13964-1	4.245	4.200	9.204	9.167	5.000	5.000	mg/L	1.	0.	10	99.	98.	80 - 120
pH	13957-3	7.42	7.44					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	14002-1	1780.	1770.					mg/L	1.		10			
Total Cyanide	W-TOTAL-14001-	< 0.02	< 0.02	0.2570	0.2601	0.2500	0.2500	mg/L	<PQL	1.	10	103.	104.	90 - 110
Total Sulfide	14001-1	< 0.1	< 0.1					mg/L	<PQL		10			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/03/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*METAL

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Total Antimony	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Arsenic	EPA-3020	12/11/2000	ELN	EPA-7060	12/20/2000	TMS
Total Barium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Beryllium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Cadmium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Chromium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Cobalt	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Copper	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Lead	EPA-3020	12/11/2000	ELN	EPA-7421	12/20/2000	TMS
Total Mercury	EPA-7470	12/12/2000	JWH2	EPA-7470	12/13/2000	PAP
Total Nickel	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Selenium	EPA-3020	12/11/2000	ELN	EPA-7740	12/21/2000	TMS
Total Silver	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Thallium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Vanadium	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD
Total Zinc	EPA-3010	12/11/2000	ELN	EPA-6010	12/12/2000	ARD

Quality Control Officer

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/03/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*METAL

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Total Antimony	TOTAL-14001-1	<100.	<100.	369.5	378.8	400.0	400.0	µg/L	<PQL	2.	20	94.	96.	75 - 125
Total Arsenic	TOTAL-14022-1-	77.08	76.05	100.3	98.98	20.00	20.00	µg/L	1.	1.	20	116.	110.	80 - 120
Total Barium	TOTAL-14001-1	<100.	<100.	185.9	187.5	200.0	200.0	µg/L	<PQL	1.	20	92.	93.	75 - 125
Total Beryllium	TOTAL-14001-1	< 10.	< 10.	173.4	178.0	200.0	200.0	µg/L	<PQL	3.	20	87.	89.	75 - 125
Total Cadmium	TOTAL-14001-1	< 10.	< 10.	192.8	197.3	200.0	200.0	µg/L	<PQL	2.	20	96.	98.	75 - 125
Total Chromium	TOTAL-14001-1	< 10.	< 10.	183.9	189.8	200.0	200.0	µg/L	<PQL	3.	20	92.	95.	75 - 125
Total Cobalt	TOTAL-14001-1	< 50.	< 50.	188.4	195.0	200.0	200.0	µg/L	<PQL	3.	20	95.	98.	75 - 125
Total Copper	TOTAL-14001-1	4.400	7.400	187.4	188.8	200.0	200.0	µg/L	<PQL	1.	20	92.	92.	75 - 125
Total Lead	TOTAL-14022-1	4.616	4.279	24.83	25.11	20.00	20.00	µg/L	<PQL	1.	20	101.	102.	80 - 120
Total Mercury	TOTAL-14001-1	< 0.2	< 0.2	1.095	1.012	1.000	1.000	µg/L	<PQL	8.	20	112.	104.	70 - 130
Total Nickel	TOTAL-14001-1	4.100	5.000	363.4	373.9	400.0	400.0	µg/L	<PQL	3.	20	90.	92.	75 - 125
Total Selenium	TOTAL-14022-1-	< 10.	< 10.	17.90	18.40	20.00	20.00	µg/L	<PQL	3.	20	93.	95.	80 - 120
Total Silver	TOTAL-14001-1	< 10.	< 10.	182.9	183.8	200.0	200.0	µg/L	<PQL	0.	20	92.	92.	75 - 125
Total Thallium	TOTAL-14001-1	<100.	<100.	401.8	413.0	400.0	400.0	µg/L	<PQL	3.	20	94.	97.	75 - 125
Total Vanadium	TOTAL-14001-1	< 10.	< 10.	190.1	195.8	200.0	200.0	µg/L	<PQL	3.	20	95.	98.	75 - 125
Total Zinc	TOTAL-14001-1	9.100	10.90	193.7	201.7	200.0	200.0	µg/L	<PQL	4.	20	92.	96.	75 - 125

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8150

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/29/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*8150

Samples Affected: 00-14001-1

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8150 compounds	EPA-3510	12/07/2000	SM/JCM	EPA-8150	12/27/2000	KMS

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8150

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/29/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*8150

Samples Affected: 00-14001-1

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
2,4-D	MS 12/7	< 0.4	2.129	2.347	2.000	2.000	µg/L	10.	30	106.	117.	48 - 213
Dinoseb	MS 12/7	< 0.2	0.625	0.692	1.000	1.000	µg/L	10.	30	62.	69.	1 - 85
2,4,5-T	MS 12/7	< 0.09	0.610	0.643	0.600	0.600	µg/L	5.	30	102.	107.	41 - 226
2,4,5-TP (Silvex)	MS 12/7	< 0.07	0.698	0.745	0.600	0.600	µg/L	6.	30	116.	124.	66 - 166

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/29/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*8270

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 compounds	EPA-3510	12/07/2000	YP	EPA-8270	12/14/2000	SKC

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/29/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*8270

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	MS 12/7	< 2.	67.	66.	80.	80.	µg/L	2.	15	84.	82.	65 - 118
1,4-Dichlorobenzene	MS 12/7	< 2.	67.	65.	80.	80.	µg/L	3.	24	84.	82.	59 - 115
2,4-Dinitrotoluene	MS 12/7	< 2.	72.	71.	80.	80.	µg/L	2.	14	91.	89.	65 - 138
Hexachlorobenzene	MS 12/7	< 2.	71.	70.	80.	80.	µg/L	2.	20	89.	87.	68 - 149
Hexachlorobutadiene	MS 12/7	< 2.	63.	62.	80.	80.	µg/L	3.	30	79.	77.	43 - 121
Hexachloroethane	MS 12/7	< 2.	71.	69.	80.	80.	µg/L	2.	30	88.	86.	41 - 121
Nitrobenzene	MS 12/7	< 2.	66.	65.	80.	80.	µg/L	2.	20	83.	81.	66 - 114
N-Nitrosodi-n-propylamine	MS 12/7	< 2.	69.	68.	80.	80.	µg/L	1.	17	86.	84.	59 - 116
Pyrene	MS 12/7	< 2.	55.	53.	80.	80.	µg/L	3.	20	68.	66.	52 - 144
1,2,4-Trichlorobenzene	MS 12/7	< 2.	65.	65.	80.	80.	µg/L	0.	23	81.	81.	56 - 120
4-Chloro-3-methylphenol	MS 12/7	< 5.	75.	75.	80.	80.	µg/L	1.	30	94.	93.	69 - 133
2-Chlorophenol	MS 12/7	< 2.	73.	71.	80.	80.	µg/L	4.	16	92.	89.	71 - 116
2-Methylphenol	MS 12/7	< 2.	71.	68.	80.	80.	µg/L	4.	20	89.	86.	65 - 122
3- & 4-Methylphenol	MS 12/7	< 2.	59.	58.	80.	80.	µg/L	1.	15	73.	72.	55 - 111
4-Nitrophenol	MS 12/7	< 2.	40.	39.	80.	80.	µg/L	4.	29	50.	48.	23 - 70
Pentachlorophenol	MS 12/7	< 10.	79.	76.	80.	80.	µg/L	4.	20	99.	95.	65 - 160
Phenol	MS 12/7	< 2.	43.	42.	80.	80.	µg/L	2.	25	53.	52.	34 - 63
2,4,6-Trichlorophenol	MS 12/7	< 5.	70.	69.	80.	80.	µg/L	2.	20	88.	86.	63 - 129

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8080

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/29/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*8080

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8080 compounds	EPA-3510	12/07/2000	YP	EPA-8080	12/15/2000	RKJ

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8080

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/29/2001
Sample Matrix: Water
QC Batch ID: 200014001-1*8080

Samples Affected: 00-14001-1 - 00-14001-3

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Aldrin	MS 12/7	< 0.005	0.241	0.215	0.250	0.250	µg/L	11.	22	96.	86.	57 - 134
gamma-BHC	MS 12/7	< 0.005	0.180	0.161	0.250	0.250	µg/L	13.	20	72.	64.	61 - 134
4,4'-DDT	MS 12/7	< 0.005	0.253	0.223	0.250	0.250	µg/L	13.	24	101.	89.	61 - 142
Dieldrin	MS 12/7	< 0.005	0.223	0.199	0.250	0.250	µg/L	11.	23	89.	80.	63 - 144
Endrin	MS 12/7	< 0.005	0.239	0.209	0.250	0.250	µg/L	14.	25	96.	84.	65 - 146
Heptachlor	MS 12/7	< 0.005	0.227	0.200	0.250	0.250	µg/L	11.	24	91.	80.	59 - 126

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

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BC Laboratories, Inc.

Chain of Custody Form

04629

PLEASE COMPLETE: BCL QUOTE ID:

Page 1 of 1

Report To:
Client: Geologic Associates
Attn: Sarah Bottelle
Street Address: 1360 Valley Vista Dr.
City, State, Zip: Diamond Bar, CA 91765
Phone: 858-861-1136 Fax:
Email Address:
Submittal #: 00-14119

Project #:
Project Name:
Project Code:
Sampler(s): Ben Salinas
Bill Lopez, Antonio Ramirez

Analysis Requested

Comments: Any questions Re: Analyses, please call Sarah Bottelle. Used BAS D.I. Water for Field & Equip. Blanks. No lab water provided

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 15 work days

Sample # (Laboratory)	Description	Date Sampled	Time Sampled	Chloride, Sulfate, TDS, Nitrate (N), pH	Metals: Ca, Mg, Na, K, Mg (Except Molybdenum + Tin)	Aldehyde 8270 (SVOCs + organophosphorus pesticides)	Cyanide, Sulfide, Chromium VI, Herbicides	8260 (Volatiles)	8080 (Organochlorine Pesticides + PCBs)	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
10	GLA-2 -1	12/6/00	1110	X	X	X	X	X	X	X	X	X	X				
	GLA-4 -2		0930	X	X	X	X	X	X	X	X	X					
	GLA-5 -3		0845	X	X	X	X	X	X	X	X	X					
	GLA-10 -4		1220	X	X	X	X	X	X	X	X	X					
	GLA-12 -5		0945	X	X	X	X	X	X	X	X	X					
	GLA-14 -6		1125	X	X	X	X	X	X	X	X	X					
	SW-1 -7		1420	X	X	X	X	X	X	X	X	X			SW		Surface Water
	SW-2 -8		1330	X	X	X	X	X	X	X	X	X			SW		Surface Water
	MWD-34 -9		1240	X	X	X	X	X	X	X	X	X					
10	Lucio-2 -10		1310	X	X	X	X	X	X	X	X	X					
1	Field Blank -11		—				X								W		D.I. Water
1	Equip. Blank -12		—				X								W		
1	Trip Blank -13TB	12/6/00	—				X								W		

CHK BY: MA BG SB
DISTRIBUTION: SUB-OUT ☐
SHORT HOLDING TIME: Cr^{+6} NO_2 NO_3 OP SS DO BOD MBAS C O T

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

Report Drinking Waters on State Form? ☐ Yes ☐ No
Send Copy to State of CA? ☐ Yes ☐ No

Sample Disposal: ☐ Return to Client ☐ Disposal by lab ☐ Archive: Months

Special Reporting: ☐ QC ☐ WIP ☐ Raw Data

	Relinquished By	Date	Time	Received By	Date	Time
1.	Ben Salinas	12/6/00	1605	[signature]	12/6/00	1605
2.	[signature]	12/7/00		[signature]	12-7-00	13:50
3.	[signature]	12-7-00	16:20	[signature]	12/7/00	1625

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 1 Of 4

Submission #: 00-14119 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments: See comment Below!

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☐ No ☒

COC Received

☒ YES ☐ NO

Ice Chest ID _____ Date/Time 12/7/00
Temperature: 1.6 °C 1620
Thermometer ID: 80 Analyst Init PC
Emissivity 95
Container QT PE

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	13 TB	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL	1	1	1																					
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS	1	1	1																					
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE			1																					
PT NITROGEN FORMS																								
PT TOTAL SULFIDE		1	1																					
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK													1											
40ml VOA VIAL	2	2	2		2	2					1													
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080	1	1	1																					
QT EPA 515.1/8150	1	1	1																					
QT EPA ~~525~~ 625/8270	2	2	2																					
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

*NOTE: "-10"; the COC reads Lucio-2, the actual containers read Lucio-4.

Comments:

Sample Numbering Completed By: CRL Date/Time: 12/7/00 1830 [F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 2 Of 4

Submission #: 00-14119 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID _____ Date/Time 12/7/00
Temperature: 11 °C 1620
Thermometer ID: 80 Analyst Init PK
Emissivity .95
Container Qtpt

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL					1	1																		
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS					1	1																		
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE					1	1																		
PT NITROGEN FORMS																								
PT TOTAL SULFIDE					1	1																		
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL							2	2		2														
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080					1	1																		
QT EPA 515.1/8150					1	1																		
QT EPA ~~525~~ 625/8270					2	2																		
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CCL Date/Time: 12/7/00 1845 [F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 3 Of 4

Submission #: 00-14119 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID _____ Date/Time 12/7/00
Temperature: -0.1 °C 1625
Thermometer ID: 80 Analyst Init PK
Emissivity 95
Container Qt pg

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL				1					1															
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS				1					1															
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE	1	1		1					1															
PT NITROGEN FORMS																								
PT TOTAL SULFIDE	1			1					1															
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL				2					2			1												
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080				1			1		1															
QT EPA 515.1/8150				1			1		1															
QT EPA ~~525~~ 1625/8270				2			2		2															
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CKl Date/Time: 12/7/00 1900

[F:\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.7 10/03/00 Page 4 Of 4

Submission #: 00-14119 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received

☒ YES ☐ NO

Ice Chest ID _____ Date/Time 12/7/00
Temperature: 2.5 °C 1625
Thermometer ID: 80 Analyst Init PK
Emissivity .95
Container QTPE

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL							1	1		1														
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS							1	1		1														
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE							1	1		1														
PT NITROGEN FORMS																								
PT TOTAL SULFIDE							1	1		1														
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK																								
40ml VOA VIAL																								
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080								1		1														
QT EPA 515.1/8150								1		1														
QT EPA ~~525~~ 625/8270								2		2														
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER																								
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

Comments:_____

Sample Numbering Completed By: CCC Date/Time: 12/7/00 1900

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sampling Date/Time: 12/06/2000 @ 11:10
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	120.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	71.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	200.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	160.	mg/L	2.0	0.50	EPA-300.0	12/08/00	12/08/00
Chloride	369.	mg/L	1.0	0.18	EPA-300.0	12/08/00	12/08/00
Nitrate as N	41.8	mg/L	0.5	0.10	EPA-300.0	12/08/00	12/08/00
pH	7.39	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	1400.	mg/L	100.	50.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sampling Date/Time: 12/06/2000 @ 09:30
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	58.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	21.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	68.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	39.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	68.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	1.61	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.21	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	477.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

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M.D.L. = Method Detection Limit

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Marna Atencio
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WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sampling Date/Time: 12/06/2000 @ 08:45
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	93.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	56.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	100.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	313.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	156.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	18.6	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.09	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	1030.	mg/L	50.	30.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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M. Atencio

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WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sampling Date/Time: 12/06/2000 @ 12:20
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	57.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	32.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	82.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	61.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	142.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	6.34	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.35	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	637.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sampling Date/Time: 12/06/2000 @ 09:45
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	42.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	26.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	74.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	38.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	115.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	0.24	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.38	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	517.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sampling Date/Time: 12/06/2000 @ 11:25
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	69.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	39.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	84.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	74.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	159.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	15.6	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.47	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	697.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Project Number: GREGORY CANYON
Sample ID: SW-1
Sampling Date/Time: 12/06/2000 @ 14:20
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium		81.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium		30.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium		67.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate		185.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride		103.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	*02	0.030	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH		7.92	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C		657.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide		0.43	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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M. Atencio

Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Project Number: GREGORY CANYON
Sample ID: SW-2
Sampling Date/Time: 12/06/2000 @ 13:30
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium		78.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium		29.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium		65.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate		185.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride		105.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	*02	0.021	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH		7.92	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C		660.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide		None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide		None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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Marna Atencio
Department Supervisor

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BC Laboratories, Inc.

WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Project Number: GREGORY CANYON
Sample ID: MWD-34
Sampling Date/Time: 12/06/2000 @ 12:40
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	74.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	26.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	58.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	144.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	75.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	None Detected	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.64	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	547.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Project Number: GREGORY CANYON
Sample ID: LUCIO-2
Sampling Date/Time: 12/06/2000 @ 13:10
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Calcium	86.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Magnesium	30.	mg/L	0.050	0.02	EPA-6010	12/13/00	12/14/00
Total Sodium	60.	mg/L	0.50	0.07	EPA-6010	12/13/00	12/14/00
Sulfate	147.	mg/L	1.	0.25	EPA-300.0	12/08/00	12/08/00
Chloride	94.	mg/L	0.5	0.090	EPA-300.0	12/08/00	12/08/00
Nitrate as N	0.42	mg/L	0.1	0.020	EPA-300.0	12/08/00	12/08/00
pH	7.35	pH Units	-.	-.	EPA-9040	12/08/00	12/08/00
Total Dissolved Solids @ 180 C	657.	mg/L	40.	20.	EPA-160.1	12/11/00	12/11/00
Total Cyanide	None Detected	mg/L	0.02	0.0063	EPA-9012	12/14/00	12/14/00
Total Sulfide	None Detected	mg/L	0.1	0.050	EPA-9030	12/11/00	12/11/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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M. Atencio

Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Calcium	*02	0.02	mg/L	0.050	0.014	EPA-6010
Total Magnesium		None Detected	mg/L	0.050	0.016	EPA-6010
Total Sodium		None Detected	mg/L	0.50	0.064	EPA-6010
Sulfate		None Detected	mg/L	1.0	0.25	EPA-300.0
Chloride		None Detected	mg/L	0.5	0.09	EPA-300.0
Nitrate as N		None Detected	mg/L	0.1	0.02	EPA-300.0
Total Dissolved Solids @ 180 C		None Detected	mg/L	10.	5.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.01	EPA-9010
Total Sulfide		None Detected	mg/L	0.1	0.05	EPA-9030

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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Marna Atencio
Department Supervisor

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WATER ANALYSIS
(GENERAL CHEMISTRY)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Calcium	*02	0.02	mg/L	0.050	0.014	EPA-6010
Total Magnesium		None Detected	mg/L	0.050	0.016	EPA-6010
Total Sodium		None Detected	mg/L	0.50	0.064	EPA-6010
Sulfate		None Detected	mg/L	1.0	0.25	EPA-300.0
Chloride		None Detected	mg/L	0.5	0.09	EPA-300.0
Nitrate as N		None Detected	mg/L	0.1	0.02	EPA-300.0
Total Dissolved Solids @ 180 C		None Detected	mg/L	10.	5.	EPA-160.1
Total Cyanide		None Detected	mg/L	0.02	0.01	EPA-9010
Total Sulfide		None Detected	mg/L	0.1	0.05	EPA-9030

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sampling Date/Time: 12/06/2000 @ 11:10
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	10.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic	*02	1.	µg/L	2.	0.7	EPA-7060	12/12/00	12/22/00
Total Barium	*02	53.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	5.	µg/L	10.	3.	EPA-6010	12/13/00	12/17/00
Total Lead	*02	0.4	µg/L	5.	0.4	EPA-7421	12/12/00	12/21/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*04	3.	µg/L	2.	0.6	EPA-7740	12/12/00	12/22/00
Total Silver	*02	4.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		40.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc		8.5	µg/L	50.	0.89	EPA-6010	12/13/00	12/15/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*04 = Sample specific matrix spike recovery(s) are not within QC limits.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sampling Date/Time: 12/06/2000 @ 09:30
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	20.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/20/00
Total Barium	*02	30.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	8.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Lead	*02	0.4	µg/L	5.	0.4	EPA-7421	12/12/00	12/20/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/20/00
Total Silver	*02	4.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		10.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	32.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sampling Date/Time: 12/06/2000 @ 08:45
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	10.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/20/00
Total Barium		150.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/17/00
Total Lead		None Detected	µg/L	5.	0.4	EPA-7421	12/12/00	12/20/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/20/00
Total Silver	*02	3.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		20.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	18.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

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Dan Schultz
Laboratory Director

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WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sampling Date/Time: 12/06/2000 @ 12:20
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	9.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/20/00
Total Barium	*02	61.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium	*02	4.	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	9.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Lead	*02	0.6	µg/L	5.	0.4	EPA-7421	12/12/00	12/20/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel	*02	4.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/20/00
Total Silver	*02	5.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		30.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	26.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

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Laboratory Director

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WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sampling Date/Time: 12/06/2000 @ 09:45
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	20.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/20/00
Total Barium	*02	20.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium	*02	5.	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	8.	µg/L	10.	3.	EPA-6010	12/13/00	12/17/00
Total Lead	*02	2.	µg/L	5.	0.4	EPA-7421	12/12/00	12/20/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel	*02	4.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/20/00
Total Silver	*02	6.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		30.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	16.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

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M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sampling Date/Time: 12/06/2000 @ 11:25
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	10.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/21/00
Total Barium	*02	96.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	7.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Lead		None Detected	µg/L	5.	0.4	EPA-7421	12/12/00	12/21/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*	2.	µg/L	2.	0.6	EPA-7740	12/12/00	12/21/00
Total Silver		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		30.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	12.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS. Sample result is between the MDL and PQL.
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Project Number: GREGORY CANYON
Sample ID: SW-1
Sampling Date/Time: 12/06/2000 @ 14:20
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	10.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic	*02	2.	µg/L	2.	0.7	EPA-7060	12/12/00	12/20/00
Total Barium	*02	77.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium	*02	5.	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	9.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Lead		None Detected	µg/L	5.	0.4	EPA-7421	12/12/00	12/20/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/20/00
Total Silver	*02	6.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/15/00
Total Vanadium		10.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	6.6	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Project Number: GREGORY CANYON
Sample ID: SW-2
Sampling Date/Time: 12/06/2000 @ 13:30
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony	*02	20.	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic	*02	0.9	µg/L	2.	0.7	EPA-7060	12/12/00	12/21/00
Total Barium	*02	80.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	8.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Lead		None Detected	µg/L	5.	0.4	EPA-7421	12/12/00	12/21/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/21/00
Total Silver	*02	4.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/14/00
Total Vanadium	*02	8.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	6.7	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.
*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Project Number: GREGORY CANYON
Sample ID: MWD-34
Sampling Date/Time: 12/06/2000 @ 12:40
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony		None Detected	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/21/00
Total Barium	*02	100.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium	*02	4.	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	6.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Lead		None Detected	µg/L	5.	0.4	EPA-7421	12/12/00	12/21/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/21/00
Total Silver	*02	4.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/14/00
Total Vanadium		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	14.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Project Number: GREGORY CANYON
Sample ID: LUCIO-2
Sampling Date/Time: 12/06/2000 @ 13:10
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents		Results	Units	P.Q.L.	M.D.L.	Method	Date Prepared	Date Analyzed
Total Antimony		None Detected	µg/L	100.	8.	EPA-6010	12/13/00	12/14/00
Total Arsenic		None Detected	µg/L	2.	0.7	EPA-7060	12/12/00	12/20/00
Total Barium		110.	µg/L	100.	0.9	EPA-6010	12/13/00	12/14/00
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010	12/13/00	12/14/00
Total Cadmium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Chromium		None Detected	µg/L	10.	4.	EPA-6010	12/13/00	12/14/00
Total Cobalt		None Detected	µg/L	50.	2.	EPA-6010	12/13/00	12/14/00
Total Copper	*02	7.	µg/L	10.	3.	EPA-6010	12/13/00	12/17/00
Total Lead	*02	0.7	µg/L	5.	0.4	EPA-7421	12/12/00	12/20/00
Total Mercury		None Detected	µg/L	0.2	0.10	EPA-7470	12/12/00	12/13/00
Total Nickel		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Selenium	*16	None Detected	µg/L	2.	0.6	EPA-7740	12/12/00	12/20/00
Total Silver		None Detected	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Thallium		None Detected	µg/L	100.	20.	EPA-6010	12/13/00	12/14/00
Total Vanadium		10.	µg/L	10.	3.	EPA-6010	12/13/00	12/14/00
Total Zinc	*02	21.	µg/L	50.	0.89	EPA-6010	12/13/00	12/14/00

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
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*16 = Batch specific matrix spike recovery(s) are not within QC limits. Accuracy verified through LCS.

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Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

WATER ANALYSIS
(METALS)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/11/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK

Constituents		Results	Units	P.Q.L.	M.D.L.	Method
Total Antimony		None Detected	µg/L	100.	7.4	EPA-6010
Total Arsenic		None Detected	µg/L	2.	0.68	EPA-7060
Total Barium	*02	1.9	µg/L	100.	0.81	EPA-6010
Total Beryllium		None Detected	µg/L	10.	0.32	EPA-6010
Total Cadmium		None Detected	µg/L	10.	3.5	EPA-6010
Total Chromium		None Detected	µg/L	10.	3.2	EPA-6010
Total Cobalt		None Detected	µg/L	50.	1.4	EPA-6010
Total Copper	*02	4.8	µg/L	10.	2.1	EPA-6010
Total Lead		None Detected	µg/L	5.	0.40	EPA-7421
Total Mercury		None Detected	µg/L	0.2	0.1	EPA-7470
Total Nickel	*02	2.9	µg/L	10.	2.1	EPA-6010
Total Selenium		None Detected	µg/L	2.	0.58	EPA-7740
Total Silver	*02	5.4	µg/L	10.	2.7	EPA-6010
Total Thallium		None Detected	µg/L	100.	16.	EPA-6010
Total Vanadium		None Detected	µg/L	10.	2.1	EPA-6010
Total Zinc	*02	7.8	µg/L	50.	0.89	EPA-6010

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Dan Schultz
Laboratory Director

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Project Number: GREGORY CANYON
Sample ID: LUCIO-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:10
Date Extracted: 12/12/2000
Date Analyzed: 12/20/2000 @ 19:14

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Sample Description: GREGORY CANYON, LUCIO-2, 12/06/2000 @ 13:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376	
Endosulfan I	None Detected	µg/L	10.	0.992	
Endosulfan II	None Detected	µg/L	10.	0.780	
Endosulfan sulfate	None Detected	µg/L	3.	0.321	
Endrin	None Detected	µg/L	2.	1.836	
Endrin aldehyde	None Detected	µg/L	10.	0.537	
Fluoranthene	None Detected	µg/L	2.	0.250	
Fluorene	None Detected	µg/L	2.	0.275	
Heptachlor	None Detected	µg/L	2.	0.272	
Heptachlor epoxide	None Detected	µg/L	2.	0.244	
Hexachlorobenzene	None Detected	µg/L	2.	0.270	
Hexachlorobutadiene	0.64	µg/L	2.	0.348	*02
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263	
Hexachloroethane	None Detected	µg/L	2.	0.191	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224	
Isophorone	None Detected	µg/L	2.	0.263	
2-Methylnaphthalene	None Detected	µg/L	2.	0.303	
Naphthalene	None Detected	µg/L	2.	0.239	
2-Naphthylamine	None Detected	µg/L	20.	0.066	
2-Nitroaniline	None Detected	µg/L	2.	0.728	
3-Nitroaniline	None Detected	µg/L	2.	1.392	
4-Nitroaniline	None Detected	µg/L	5.	1.095	
Nitrobenzene	None Detected	µg/L	2.	0.230	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196	
Phenanthrene	None Detected	µg/L	2.	0.231	
Pyrene	0.27	µg/L	2.	0.223	*02
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228	
2-Chlorophenol	None Detected	µg/L	2.	0.159	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386	
2-Methylphenol	None Detected	µg/L	2.	0.196	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410	
2-Nitrophenol	None Detected	µg/L	2.	0.253	
4-Nitrophenol	None Detected	µg/L	2.	0.454	
Pentachlorophenol	None Detected	µg/L	10.	0.533	
Phenol	None Detected	µg/L	2.	0.184	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237	
Acetophenone	None Detected	µg/L	10.	0.120	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459	
4-Aminobiphenyl	None Detected	µg/L	20.	0.164	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Sample Description: GREGORY CANYON, LUCIO-2, 12/06/2000 @ 13:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	59.	21-100
Phenol-d5	48.	10-94
Nitrobenzene-d5	91.	35-114
2-Fluorobiphenyl	79.	43-116
2,4,6-Tribromophenol	96.	10-123
d14-Terphenyl	91.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/02/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Sample Description: GREGORY CANYON, LUCIO-2, 12/06/2000 @ 13:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.
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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 11:10
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 16:28
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	0.28	µg/L	2.	0.237	*02
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	1.8	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Sample Description: GREGORY CANYON, GLA-2, 12/06/2000 @ 11:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Sample Description: GREGORY CANYON, GLA-2, 12/06/2000 @ 11:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	65.	21-100
Phenol-d5	59.	10-94
Nitrobenzene-d5	83.	35-114
2-Fluorobiphenyl	72.	43-116
2,4,6-Tribromophenol	91.	10-123
d14-Terphenyl	77.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Sample Description: GREGORY CANYON, GLA-2, 12/06/2000 @ 11:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Note: Method blank for bis (2-ethylhexyl) phthalate detected at 0.51µg/L.
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 09:30
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 17:12
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	2.4	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Sample Description: GREGORY CANYON, GLA-4, 12/06/2000 @ 09:30, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Sample Description: GREGORY CANYON, GLA-4, 12/06/2000 @ 09:30, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	66.	21-100
Phenol-d5	60.	10-94
Nitrobenzene-d5	86.	35-114
2-Fluorobiphenyl	76.	43-116
2,4,6-Tribromophenol	92.	10-123
d14-Terphenyl	80.	33-141

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Sample Description: GREGORY CANYON, GLA-4, 12/06/2000 @ 09:30, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Note: Method blank for bis (2-ethylhexyl) phthalate detected at 0.51μg/L.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.
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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 08:45
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 17:55
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	1.8	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Sample Description: GREGORY CANYON, GLA-5, 12/06/2000 @ 08:45, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Sample Description: GREGORY CANYON, GLA-5, 12/06/2000 @ 08:45, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	65.	21-100
Phenol-d5	56.	10-94
Nitrobenzene-d5	85.	35-114
2-Fluorobiphenyl	76.	43-116
2,4,6-Tribromophenol	91.	10-123
d14-Terphenyl	80.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Sample Description: GREGORY CANYON, GLA-5, 12/06/2000 @ 08:45, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Note: Method blank for bis (2-ethylhexyl) phthalate detected at 0.51μg/L.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 12:20
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 18:39
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	2.5	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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BC Laboratories, Inc.

Base/Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Sample Description: GREGORY CANYON, GLA-10, 12/06/2000 @ 12:20, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Sample Description: GREGORY CANYON, GLA-10, 12/06/2000 @ 12:20, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	63.	21-100
Phenol-d5	54.	10-94
Nitrobenzene-d5	83.	35-114
2-Fluorobiphenyl	74.	43-116
2,4,6-Tribromophenol	95.	10-123
d14-Terphenyl	81.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Sample Description: GREGORY CANYON, GLA-10, 12/06/2000 @ 12:20, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Note: Method blank for bis (2-ethylhexyl) phthalate detected at 0.51μg/L.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 09:45
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 19:23
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	0.35	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Sample Description: GREGORY CANYON, GLA-12, 12/06/2000 @ 09:45, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Sample Description: GREGORY CANYON, GLA-12, 12/06/2000 @ 09:45, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	59.	21-100
Phenol-d5	55.	10-94
Nitrobenzene-d5	86.	35-114
2-Fluorobiphenyl	75.	43-116
2,4,6-Tribromophenol	90.	10-123
d14-Terphenyl	77.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Sample Description: GREGORY CANYON, GLA-12, 12/06/2000 @ 09:45, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Note: Method blank for bis (2-ethylhexyl) phthalate detected at 0.51μg/L.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 11:25
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 20:07
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Sample Description: GREGORY CANYON, GLA-14, 12/06/2000 @ 11:25, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Sample Description: GREGORY CANYON, GLA-14, 12/06/2000 @ 11:25, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	64.	21-100
Phenol-d5	56.	10-94
Nitrobenzene-d5	87.	35-114
2-Fluorobiphenyl	78.	43-116
2,4,6-Tribromophenol	92.	10-123
d14-Terphenyl	79.	33-141

All results listed in this report are for the exclusive use of the submitting party, BC Laboratories, Inc. assumes no responsibility for report alteration, detachment or third party interpretation.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Sample Description: GREGORY CANYON, GLA-14, 12/06/2000 @ 11:25, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: SURFACE WATER
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 14:20
Date Extracted: 12/08/2000
Date Analyzed: 12/19/2000 @ 04:49
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	3.2	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Sample Description: GREGORY CANYON, SW-1, 12/06/2000 @ 14:20, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Sample Description: GREGORY CANYON, SW-1, 12/06/2000 @ 14:20, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	63.	21-100
Phenol-d5	54.	10-94
Nitrobenzene-d5	88.	35-114
2-Fluorobiphenyl	75.	43-116
2,4,6-Tribromophenol	98.	10-123
d14-Terphenyl	68.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Sample Description: GREGORY CANYON, SW-1, 12/06/2000 @ 14:20, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Note: Method blank for bis (2-ethylhexyl) phthalate detected at 0.51μg/L. Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: SURFACE WATER
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:30
Date Extracted: 12/08/2000
Date Analyzed: 12/19/2000 @ 05:32
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	0.55	µg/L	5.	0.325	*
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Sample Description: GREGORY CANYON, SW-2, 12/06/2000 @ 13:30, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Sample Description: GREGORY CANYON, SW-2, 12/06/2000 @ 13:30, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits	
2-Fluorophenol	16.	21-100	*21
Phenol-d5	18.	10-94	
Nitrobenzene-d5	87.	35-114	
2-Fluorobiphenyl	75.	43-116	
2,4,6-Tribromophenol	13.	10-123	
d14-Terphenyl	64.	33-141	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Sample Description: GREGORY CANYON, SW-2, 12/06/2000 @ 13:30, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
* = Sample result is between the MDL and PQL.
Note: Method blank for bis(2-ethylhexyl)phthalate detected at 0.51μg/L.
*21 = Surrogate recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Project Number: GREGORY CANYON
Sample ID: MWD-34
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 12:40
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 20:51
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Sample Description: GREGORY CANYON, MWD-34, 12/06/2000 @ 12:40, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Sample Description: GREGORY CANYON, MWD-34, 12/06/2000 @ 12:40, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	47.	21-100
Phenol-d5	41.	10-94
Nitrobenzene-d5	87.	35-114
2-Fluorobiphenyl	77.	43-116
2,4,6-Tribromophenol	78.	10-123
d14-Terphenyl	78.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Sample Description: GREGORY CANYON, MWD-34, 12/06/2000 @ 12:40, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Project Number: GREGORY CANYON
Sample ID: LUCIO-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:10
Date Extracted: 12/12/2000
Date Analyzed: 12/20/2000 @ 19:14

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Sample Description: GREGORY CANYON, LUCIO-2, 12/06/2000 @ 13:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376	
Endosulfan I	None Detected	µg/L	10.	0.992	
Endosulfan II	None Detected	µg/L	10.	0.780	
Endosulfan sulfate	None Detected	µg/L	3.	0.321	
Endrin	None Detected	µg/L	2.	1.836	
Endrin aldehyde	None Detected	µg/L	10.	0.537	
Fluoranthene	None Detected	µg/L	2.	0.250	
Fluorene	None Detected	µg/L	2.	0.275	
Heptachlor	None Detected	µg/L	2.	0.272	
Heptachlor epoxide	None Detected	µg/L	2.	0.244	
Hexachlorobenzene	None Detected	µg/L	2.	0.270	
Hexachlorobutadiene	0.64	µg/L	2.	0.348	*02
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263	
Hexachloroethane	None Detected	µg/L	2.	0.191	
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224	
Isophorone	None Detected	µg/L	2.	0.263	
2-Methylnaphthalene	None Detected	µg/L	2.	0.303	
Naphthalene	None Detected	µg/L	2.	0.239	
2-Naphthylamine	None Detected	µg/L	20.	0.066	
2-Nitroaniline	None Detected	µg/L	2.	0.728	
3-Nitroaniline	None Detected	µg/L	2.	1.392	
4-Nitroaniline	None Detected	µg/L	5.	1.095	
Nitrobenzene	None Detected	µg/L	2.	0.230	
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331	
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850	
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196	
Phenanthrene	None Detected	µg/L	2.	0.231	
Pyrene	0.27	µg/L	2.	0.223	*02
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354	
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228	
2-Chlorophenol	None Detected	µg/L	2.	0.159	
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274	
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670	
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278	
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386	
2-Methylphenol	None Detected	µg/L	2.	0.196	
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410	
2-Nitrophenol	None Detected	µg/L	2.	0.253	
4-Nitrophenol	None Detected	µg/L	2.	0.454	
Pentachlorophenol	None Detected	µg/L	10.	0.533	
Phenol	None Detected	µg/L	2.	0.184	
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258	
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237	
Acetophenone	None Detected	µg/L	10.	0.120	
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459	
4-Aminobiphenyl	None Detected	µg/L	20.	0.164	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Sample Description: GREGORY CANYON, LUCIO-2, 12/06/2000 @ 13:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	59.	21-100
Phenol-d5	48.	10-94
Nitrobenzene-d5	91.	35-114
2-Fluorobiphenyl	79.	43-116
2,4,6-Tribromophenol	96.	10-123
d14-Terphenyl	91.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Sample Description: GREGORY CANYON, LUCIO-2, 12/06/2000 @ 13:10, B. SALINAS, B. LOPEZ, A. RAMIREZ

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK #1-9
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 16:28
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	0.51	µg/L	5.	0.325	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Sample Description: GREGORY CANYON, METHOD BLANK #1-9

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Sample Description: GREGORY CANYON, METHOD BLANK #1-9

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	68.	21-100
Phenol-d5	52.	10-94
Nitrobenzene-d5	90.	35-114
2-Fluorobiphenyl	75.	43-116
2,4,6-Tribromophenol	96.	10-123
d14-Terphenyl	91.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Sample Description: GREGORY CANYON, METHOD BLANK #1-9

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK #10
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/12/2000
Date Analyzed: 12/20/2000 @ 19:14

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Acenaphthene	None Detected	µg/L	2.	0.230
Acenaphthylene	None Detected	µg/L	2.	0.356
Aldrin	None Detected	µg/L	2.	0.261
Aniline	None Detected	µg/L	5.	1.800
Anthracene	None Detected	µg/L	2.	0.220
Benzidine	None Detected	µg/L	20.	0.160
Benzo (a) anthracene	None Detected	µg/L	2.	0.263
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633
Benzo (a) pyrene	None Detected	µg/L	2.	0.342
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242
Benzoic Acid	None Detected	µg/L	10.	0.831
Benzyl alcohol	None Detected	µg/L	2.	0.656
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237
alpha-BHC	None Detected	µg/L	2.	0.232
beta-BHC	None Detected	µg/L	2.	0.226
delta-BHC	None Detected	µg/L	2.	0.255
gamma-BHC	None Detected	µg/L	2.	0.210
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217
bis(2-ethylhexyl)phthalate	None Detected	µg/L	5.	0.325
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285
4-Chloroaniline	None Detected	µg/L	2.	1.707
2-Chloronaphthalene	None Detected	µg/L	2.	0.274
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304
Chrysene	None Detected	µg/L	2.	0.193
4,4-DDD'	None Detected	µg/L	2.	0.211
4,4-DDE'	None Detected	µg/L	3.	0.749
4,4-DDT'	None Detected	µg/L	2.	0.218
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293
Dibenzofuran	None Detected	µg/L	2.	0.290
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350
Dieldrin	None Detected	µg/L	3.	0.424
Diethyl phthalate	None Detected	µg/L	2.	0.283
Dimethyl phthalate	None Detected	µg/L	2.	0.244
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276
Di-n-octylphthalate	None Detected	µg/L	2.	0.198
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376

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4100 Atlas Court * Bakersfield, CA 93308 * (661)327-4911 * Fax(661)327-1918 * www.bclabs.com

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7MB

Sample Description: GREGORY CANYON, METHOD BLANK #10

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7MB

Sample Description: GREGORY CANYON, METHOD BLANK #10

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	68.	21-100
Phenol-d5	54.	10-94
Nitrobenzene-d5	91.	35-114
2-Fluorobiphenyl	80.	43-116
2,4,6-Tribromophenol	108.	10-123
d14-Terphenyl	86.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7MB

Sample Description: GREGORY CANYON, METHOD BLANK #10

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/08/2000
Date Analyzed: 12/18/2000 @ 16:28
Dilution Used: 1

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
Acenaphthene	None Detected	µg/L	2.	0.230	
Acenaphthylene	None Detected	µg/L	2.	0.356	
Aldrin	None Detected	µg/L	2.	0.261	
Aniline	None Detected	µg/L	5.	1.800	
Anthracene	None Detected	µg/L	2.	0.220	
Benzidine	None Detected	µg/L	20.	0.160	
Benzo (a) anthracene	None Detected	µg/L	2.	0.263	
Benzo (b) fluoranthene	None Detected	µg/L	2.	0.658	
Benzo (k) fluoranthene	None Detected	µg/L	2.	0.633	
Benzo (a) pyrene	None Detected	µg/L	2.	0.342	
Benzo (ghi) perylene	None Detected	µg/L	2.	0.242	
Benzoic Acid	None Detected	µg/L	10.	0.831	
Benzyl alcohol	None Detected	µg/L	2.	0.656	
Butyl Benzyl phthalate	None Detected	µg/L	2.	0.237	
alpha-BHC	None Detected	µg/L	2.	0.232	
beta-BHC	None Detected	µg/L	2.	0.226	
delta-BHC	None Detected	µg/L	2.	0.255	
gamma-BHC	None Detected	µg/L	2.	0.210	
bis(2-chloroethyl)ether	None Detected	µg/L	2.	0.235	
bis(2-chloroethoxy)methane	None Detected	µg/L	2.	0.554	
bis(2-chloro-1-methylethyl)	None Detected	µg/L	2.	0.217	
bis(2-ethylhexyl)phthalate	0.51	µg/L	5.	0.325	*02
4-Bromophenyl phenyl ether	None Detected	µg/L	2.	0.285	
4-Chloroaniline	None Detected	µg/L	2.	1.707	
2-Chloronaphthalene	None Detected	µg/L	2.	0.274	
4-Chlorophenyl phenyl ether	None Detected	µg/L	2.	0.304	
Chrysene	None Detected	µg/L	2.	0.193	
4,4-DDD'	None Detected	µg/L	2.	0.211	
4,4-DDE'	None Detected	µg/L	3.	0.749	
4,4-DDT'	None Detected	µg/L	2.	0.218	
Dibenzo (a,h) anthracene	None Detected	µg/L	3.	0.293	
Dibenzofuran	None Detected	µg/L	2.	0.290	
Di-n-butyl phthalate	None Detected	µg/L	2.	0.241	
1,2-Dichlorobenzene	None Detected	µg/L	2.	0.237	
1,3-Dichlorobenzene	None Detected	µg/L	2.	0.234	
1,4-Dichlorobenzene	None Detected	µg/L	2.	0.272	
3,3-Dichlorobenzidine	None Detected	µg/L	10.	0.350	
Dieldrin	None Detected	µg/L	3.	0.424	
Diethyl phthalate	None Detected	µg/L	2.	0.283	
Dimethyl phthalate	None Detected	µg/L	2.	0.244	
2,4-Dinitrotoluene	None Detected	µg/L	2.	0.241	
2,6-Dinitrotoluene	None Detected	µg/L	2.	0.276	
Di-n-octylphthalate	None Detected	µg/L	2.	0.198	

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Sample Description: GREGORY CANYON, METHOD BLANK

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
1,2-Diphenylhydrazine	None Detected	µg/L	2.	0.376
Endosulfan I	None Detected	µg/L	10.	0.992
Endosulfan II	None Detected	µg/L	10.	0.780
Endosulfan sulfate	None Detected	µg/L	3.	0.321
Endrin	None Detected	µg/L	2.	1.836
Endrin aldehyde	None Detected	µg/L	10.	0.537
Fluoranthene	None Detected	µg/L	2.	0.250
Fluorene	None Detected	µg/L	2.	0.275
Heptachlor	None Detected	µg/L	2.	0.272
Heptachlor epoxide	None Detected	µg/L	2.	0.244
Hexachlorobenzene	None Detected	µg/L	2.	0.270
Hexachlorobutadiene	None Detected	µg/L	2.	0.348
Hexachlorocyclopentadiene	None Detected	µg/L	2.	0.263
Hexachloroethane	None Detected	µg/L	2.	0.191
Indeno (1,2,3-cd) pyrene	None Detected	µg/L	2.	0.224
Isophorone	None Detected	µg/L	2.	0.263
2-Methylnaphthalene	None Detected	µg/L	2.	0.303
Naphthalene	None Detected	µg/L	2.	0.239
2-Naphthylamine	None Detected	µg/L	20.	0.066
2-Nitroaniline	None Detected	µg/L	2.	0.728
3-Nitroaniline	None Detected	µg/L	2.	1.392
4-Nitroaniline	None Detected	µg/L	5.	1.095
Nitrobenzene	None Detected	µg/L	2.	0.230
n-Nitrosodimethylamine	None Detected	µg/L	2.	0.331
n-Nitrosodiphenylamine	None Detected	µg/L	2.	1.850
N-Nitrosodi-n-propylamine	None Detected	µg/L	2.	0.196
Phenanthrene	None Detected	µg/L	2.	0.231
Pyrene	None Detected	µg/L	2.	0.223
1,2,4-Trichlorobenzene	None Detected	µg/L	2.	0.354
4-Chloro-3-methylphenol	None Detected	µg/L	5.	0.228
2-Chlorophenol	None Detected	µg/L	2.	0.159
2,4-Dichlorophenol	None Detected	µg/L	2.	0.274
2,4-Dimethylphenol	None Detected	µg/L	2.	0.670
2,4-Dinitrophenol	None Detected	µg/L	10.	0.278
2-Methyl-4,6-dinitrophenol	None Detected	µg/L	10.	1.386
2-Methylphenol	None Detected	µg/L	2.	0.196
3- & 4-Methylphenol	None Detected	µg/L	2.	0.410
2-Nitrophenol	None Detected	µg/L	2.	0.253
4-Nitrophenol	None Detected	µg/L	2.	0.454
Pentachlorophenol	None Detected	µg/L	10.	0.533
Phenol	None Detected	µg/L	2.	0.184
2,4,5-Trichlorophenol	None Detected	µg/L	5.	0.258
2,4,6-Trichlorophenol	None Detected	µg/L	5.	0.237
Acetophenone	None Detected	µg/L	10.	0.120
2-Acetylaminofluorene	None Detected	µg/L	10.	0.459
4-Aminobiphenyl	None Detected	µg/L	20.	0.164
2,6-Dichlorophenol	None Detected	µg/L	10.	0.164

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Sample Description: GREGORY CANYON, METHOD BLANK

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
p-(Dimethylamine) azobenzene	None Detected	µg/L	10.	0.287
7,12-Dimethylbenz (a) anthracene	None Detected	µg/L	10.	0.104
3,3'-Dimethylbenzidine	None Detected	µg/L	20.	0.248
Diphenylamine	None Detected	µg/L	10.	0.081
Ethyl methanesulfonate	None Detected	µg/L	10.	0.170
Kepone	None Detected	µg/L	20.	2.466
Methapyrilene	None Detected	µg/L	10.	0.869
3-Methylcholanthrene	None Detected	µg/L	10.	0.148
Methyl methanesulfonate	None Detected	µg/L	10.	0.128
1,4-Napthoquinone	None Detected	µg/L	20.	0.473
1-Napthylamine	None Detected	µg/L	20.	0.182
5-Nitro-o-toluidine	None Detected	µg/L	10.	0.062
n-Nitrosodibutylamine	None Detected	µg/L	10.	0.188
n-Nitrosomethylethylamine	None Detected	µg/L	10.	0.253
n-Nitrosopiperidine	None Detected	µg/L	10.	0.173
n-Nitrosopyrrolidine	None Detected	µg/L	10.	0.158
Pentachlorobenzene	None Detected	µg/L	10.	0.124
Pentachloronitrobenzene	None Detected	µg/L	10.	0.167
Phenacetin	None Detected	µg/L	10.	0.127
1,4-Phenylenediamine	None Detected	µg/L	20.	0.484
Pronamide	None Detected	µg/L	10.	0.134
1,2,4,5-Tetrachlorobenzene	None Detected	µg/L	10.	0.193
2,3,4,6-Tetrachlorophenol	None Detected	µg/L	10.	0.239
o-Toluidine	None Detected	µg/L	10.	0.072
0,0,0-Triethyl phosphorothioate	None Detected	µg/L	10.	0.178
1,3,5-Trinitrobenzene	None Detected	µg/L	10.	0.059

Quality Control Data

Surrogates	% Recovery	Control Limits
2-Fluorophenol	68.	21-100
Phenol-d5	52.	10-94
Nitrobenzene-d5	90.	35-114
2-Fluorobiphenyl	75.	43-116
2,4,6-Tribromophenol	96.	10-123
d14-Terphenyl	91.	33-141

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Base Neutral and Acid Extractables
Organic Analysis
(EPA Method 8270)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/30/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4MB

Sample Description: GREGORY CANYON, METHOD BLANK

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*02 = Sample result is between the MDL and PQL.

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 11:10
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 04:41

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	106.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 09:30
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 07:16

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits	
2,4-Dichlorophenylacetic acid	116.	40-115	*21

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.
*21 = Surrogate recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 08:45
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 07:42

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	108.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 12:20
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 08:08

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits	
2,4-Dichlorophenylacetic acid	117.	40-115	*21

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.
*21 = Surrogate recovery not within established limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 09:45
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 08:34

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	95.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 11:25
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 09:00

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	115.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Chlorinated Herbicides
(EPA Method 8150)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: SURFACE WATER
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 14:20
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 10:44

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	103.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

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Stuart G. Buttram
Department Supervisor

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Chlorinated Herbicides
(EPA Method 8150)

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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: SURFACE WATER
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:30
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 11:09

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	97.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Project Number: GREGORY CANYON
Sample ID: MWD-34
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 12:40
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 11:35

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	103.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

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Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Project Number: GREGORY CANYON
Sample ID: LUCIO-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:10
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 12:01

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.	
2,4-D	None Detected	µg/L	0.4	0.16	*03
Dinoseb	None Detected	µg/L	0.2	0.052	*03
2,4,5-T	None Detected	µg/L	0.09	0.032	
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024	

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	110.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

Flag Explanations:
*03 = CCV recovery not within method limits.

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Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/31/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-6MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/08/2000
Date Analyzed: 12/28/2000 @ 04:41

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
2,4-D	None Detected	µg/L	0.4	0.16
Dinoseb	None Detected	µg/L	0.2	0.052
2,4,5-T	None Detected	µg/L	0.09	0.032
2,4,5-TP (Silvex)	None Detected	µg/L	0.07	0.024

Quality Control Data

Surrogates	% Recovery	Control Limits
2,4-Dichlorophenylacetic acid	111.	40-115

P.Q.L. = Practical Quantitation Limit (refers to the least amount of analyte quantifiable based on sample size used and analytical technique employed).
M.D.L. = Method Detection Limit

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Organochlorine Pesticides and PCB's
(EPA Method 8080)

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Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/29/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-1

Project Number: GREGORY CANYON
Sample ID: GLA-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 11:10
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 18:26

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	89.	%	49-122	
Surrogates				
Decachlorobiphenyl	93.	%	52-125	

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Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-2

Project Number: GREGORY CANYON
Sample ID: GLA-4
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 09:30
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 18:54

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	76.	%	49-122	
Surrogates				
Decachlorobiphenyl	103.	%	52-125	

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Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-3

Project Number: GREGORY CANYON
Sample ID: GLA-5
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 08:45
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 19:21

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	59.	%	49-122	
Surrogates				
Decachlorobiphenyl	94.	%	52-125	

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(EPA Method 8080)

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Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-4

Project Number: GREGORY CANYON
Sample ID: GLA-10
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 12:20
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 19:49

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	68.	%	49-122	
Surrogates				
Decachlorobiphenyl	95.	%	52-125	

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Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-5

Project Number: GREGORY CANYON
Sample ID: GLA-12
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 09:45
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 20:16

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	66.	%	49-122	
Surrogates				
Decachlorobiphenyl	92.	%	52-125	

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SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-6

Project Number: GREGORY CANYON
Sample ID: GLA-14
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 11:25
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 20:44

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	65.	%	49-122	
Surrogates				
Decachlorobiphenyl	94.	%	52-125	

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-7

Project Number: GREGORY CANYON
Sample ID: SW-1
Sample Matrix: SURFACE WATER
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 14:20
Date Extracted: 12/15/2000
Date Analyzed: 12/15/2000 @ 21:11

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	51.	%	49-122	
Surrogates				
Decachlorobiphenyl	74.	%	52-125	

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-8

Project Number: GREGORY CANYON
Sample ID: SW-2
Sample Matrix: SURFACE WATER
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:30
Date Extracted: 12/12/2000
Date Analyzed: 12/16/2000 @ 01:49

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	60.	%	49-122	
Surrogates				
Decachlorobiphenyl	82.	%	52-125	

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-9

Project Number: GREGORY CANYON
Sample ID: MWD-34
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 12:40
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 02:17

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	81.	%	49-122	
Surrogates				
Decachlorobiphenyl	89.	%	52-125	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 12/28/2000
Date Received: 12/07/2000
Laboratory No.: 00-14119-10

Project Number: GREGORY CANYON
Sample ID: LUCIO-2
Sample Matrix: Water
Sample Collected By: B. SALINAS, B. LOPEZ, A. RAM

Date Collected: 12/06/2000 @ 13:10
Date Extracted: 12/12/2000
Date Analyzed: 12/16/2000 @ 02:45

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.032
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.019
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	91.	%	49-122	
Surrogates				
Decachlorobiphenyl	91.	%	52-125	

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Stuart G. Buttram
Department Supervisor

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BC Laboratories, Inc.

Organochlorine Pesticides and PCB's
(EPA Method 8080)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
Attn: SARAH BATTELLE 858-451-1136

Date Reported: 01/29/2001
Date Received: 12/07/2000
Laboratory No.: 00-14119-5MB

Project Number: GREGORY CANYON
Sample ID: METHOD BLANK
Sample Matrix: Blank Water

Date Collected:
Date Extracted: 12/12/2000
Date Analyzed: 12/15/2000 @ 18:26

Constituents	Analysis Results	Reporting Units	P.Q.L.	M.D.L.
Aldrin	None Detected	µg/L	0.005	0.0015
alpha-BHC	None Detected	µg/L	0.005	0.0008
beta-BHC	None Detected	µg/L	0.005	0.0011
delta-BHC	None Detected	µg/L	0.005	0.0008
gamma-BHC	None Detected	µg/L	0.005	0.0009
Chlordane (Technical)	None Detected	µg/L	0.1	0.05
4,4'-DDD	None Detected	µg/L	0.005	0.0011
4,4'-DDE	None Detected	µg/L	0.005	0.0009
4,4'-DDT	None Detected	µg/L	0.005	0.0017
Dieldrin	None Detected	µg/L	0.005	0.0014
Endosulfan I	None Detected	µg/L	0.005	0.0011
Endosulfan II	None Detected	µg/L	0.005	0.0012
Endosulfan Sulfate	None Detected	µg/L	0.005	0.0011
Endrin	None Detected	µg/L	0.005	0.0015
Endrin Aldehyde	None Detected	µg/L	0.01	0.0034
Heptachlor	None Detected	µg/L	0.005	0.0006
Heptachlor Epoxide	None Detected	µg/L	0.005	0.0009
Hexachlorocyclopentadiene	None Detected	µg/L	0.01	0.005
Methoxychlor	None Detected	µg/L	0.005	0.0009
Toxaphene	None Detected	µg/L	2.	1.
PCB-1016	None Detected	µg/L	0.2	0.1
PCB-1221	None Detected	µg/L	0.2	0.1
PCB-1232	None Detected	µg/L	0.2	0.1
PCB-1242	None Detected	µg/L	0.2	0.025
PCB-1248	None Detected	µg/L	0.2	0.022
PCB-1254	None Detected	µg/L	0.2	0.041
PCB-1260	None Detected	µg/L	0.2	0.046
Total PCB's (Summation)	None Detected	µg/L	0.2	0.1
Surrogates				
TCMX	82.	%	49-122	
Surrogates				
Decachlorobiphenyl	92.	%	52-125	

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

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SUBCONTRACT CHAIN OF CUSTODY

Subcontract Lab: ZALCO LABORATORIES (ZLCLB)
4309 ARMOUR AVE.
BAKERSFIELD, CA 93308
Attn: RHONDA HAYES
Phone: 661-395-0539
FAX: 661-395-3069

0012133
0012133

Report To: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn: Michelle Buttram
Phone: 661-327-4911

Bill To: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Attn: Accounts Payable

TAT: normal

Sample ID	Sample Matrix	Sample Date	Sample Time	Requested Tests 01	
00-14119-1	Water	12/06/2000	11:10	X	2 voas
00-14119-2	Water	12/06/2000	09:30	X	
00-14119-3	Water	12/06/2000	08:45	X	
00-14119-4	Water	12/06/2000	12:20	X	
00-14119-5	Water	12/06/2000	09:45	X	
00-14119-6	Water	12/06/2000	11:25	X	
00-14119-7	SURFACE WA	12/06/2000	14:20	X	
00-14119-8	SURFACE WA	12/06/2000	13:30	X	
00-14119-9	Water	12/06/2000	12:40	X	
00-14119-10	Water	12/06/2000	13:10	X	
00-14119-11	Blank Wate	12/06/2000		X	1 voa
00-14119-12	Blank Wate	12/06/2000		X	
00-14119-13TB	Blank Wate	12/06/2000		X	

Requested Tests Legend

01 GC-8260-WATER

Subcontract Lab: ZALCO LABORATORIES (ZLCLB)

Note: Please do not subcontract any test without obtaining approval from an authorized representative of BC laboratories.

Comments: RUN LIST FOR GREGORY CANYON AS PER JOHN HATZMAN

		Date/Time
Relinquished By:	[signature]	PK 12/8/00 1320
Received By:	[signature]	12-8-00 1330
Relinquished By:	[signature]	12-8-00 1337
Received By:	[signature]	12/8/00 1337
Relinquished By:		
Received By:		
Relinquished By:		
Received By:		

ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-1
Sampled by Client

Laboratory No: 0012133-1
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 11:10

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 17:00:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

DEC 2 2 2000

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-1
Sampled by Client

Laboratory No: 0012133-1
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 11:10

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 17:00:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-1
Sampled by Client

Laboratory No: 0012133-1
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 11:10

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 17:00:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
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mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-2
Sampled by Client

Laboratory No: 0012133-2
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 09:30

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 17:36:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-2
Sampled by Client

Laboratory No: 0012133-2
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 09:30

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 17:36:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-2
Sampled by Client

Laboratory No: 0012133-2
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 09:30

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 17:36:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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Bakersfield, California 93308

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FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-3
Sampled by Client

Laboratory No: 0012133-3
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 08:45

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 18:12:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-3
Sampled by Client

Laboratory No: 0012133-3
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 08:45

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 18:12:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-3
Sampled by Client

Laboratory No: 0012133-3
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 08:45

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 18:12:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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Bakersfield, California 93308

(661) 395-0539
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B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-4
Sampled by Client

Laboratory No: 0012133-4
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 12:20

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 18:48:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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DLR : Detection Limit for Reporting Purposes

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Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-4
Sampled by Client

Laboratory No: 0012133-4
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 12:20

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 18:48:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-4
Sampled by Client

Laboratory No: 0012133-4
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 12:20

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 18:48:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-5
Sampled by Client

Laboratory No: 0012133-5
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 09:45

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 19:24:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-5
Sampled by Client

Laboratory No: 0012133-5
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 09:45

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 19:24:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-5
Sampled by Client

Laboratory No: 0012133-5
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 09:45

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 19:24:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-6
Sampled by Client

Laboratory No: 0012133-6
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 11:25

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 21:49:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-6
Sampled by Client

Laboratory No: 0012133-6
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 11:25

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 21:49:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-6
Sampled by Client

Laboratory No: 0012133-6
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 11:25

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 21:49:00 SVM

cc:

Method Reference

1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-7
Sampled by Client

Laboratory No: 0012133-7
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 14:20

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 22:25:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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mmhos/cm : millimhos/cm at 25 C
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Analytical & Consulting Services

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-7
Sampled by Client

Laboratory No: 0012133-7
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 14:20

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 22:25:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
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DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-7
Sampled by Client

Laboratory No: 0012133-7
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 14:20

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 22:25:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-8
Sampled by Client

Laboratory No: 0012133-8
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 13:30

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 23:01:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-8
Sampled by Client

Laboratory No: 0012133-8
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 13:30

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 23:01:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-8
Sampled by Client

Laboratory No: 0012133-8
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 13:30

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 23:01:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
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B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-9
Sampled by Client

Laboratory No: 0012133-9
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 12:40

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 23:38:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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DLR : Detection Limit for Reporting Purposes

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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-9
Sampled by Client

Laboratory No: 0012133-9
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 12:40

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/13/00 23:38:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-9
Sampled by Client

Laboratory No: 0012133-9
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 12:40

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/13/00 23:38:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
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Bakersfield, California 93308

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FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-10
Sampled by Client

Laboratory No: 0012133-10
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 13:10

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	0.98	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 09:45:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-10
Sampled by Client

Laboratory No: 0012133-10
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 13:10

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	ND	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 09:45:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-10
Sampled by Client

Laboratory No: 0012133-10
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled : 13:10

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/14/00 09:45:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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NSS : Not Sufficient Sample for Analysis
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4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-11
Sampled by Client

Laboratory No: 0012133-11
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 10:58:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-11
Sampled by Client

Laboratory No: 0012133-11
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	12.1	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 10:58:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
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DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-11
Sampled by Client

Laboratory No: 0012133-11
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/14/00 10:58:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference

1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-12
Sampled by Client

Laboratory No: 0012133-12
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 11:34:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
ND : None Detected N/A : Not Applicable
NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-12
Sampled by Client

Laboratory No: 0012133-12
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	12.1	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 11:34:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
umhos/cm : micromhos/cm at 25 C
mmhos/cm : millimhos/cm at 25 C
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NSS : Not Sufficient Sample for Analysis
DLR : Detection Limit for Reporting Purposes

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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-12
Sampled by Client

Laboratory No: 0012133-12
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/14/00 11:34:00 SVM

cc:

Method Reference
1. EPA SW-846, 1994 3rd Edition

Jim Etherton, Lab Operations Manager

mg/L : milligrams per Liter (parts per million)
ug/L : micrograms per Liter (parts per billion)
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B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-13
Sampled by Client

Laboratory No: 0012133-13
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Volatile Organics				
Benzene	ND	ug/L	0.5	8260/1
Bromobenzene	ND	ug/L	0.5	8260/1
Bromochloromethane	ND	ug/L	0.5	8260/1
Bromodichloromethane	ND	ug/L	0.5	8260/1
Bromoform	ND	ug/L	0.5	8260/1
Bromomethane	ND	ug/L	0.5	8260/1
n-Butylbenzene	ND	ug/L	0.5	8260/1
sec-Butylbenzene	ND	ug/L	0.5	8260/1
tert-Butylbenzene	ND	ug/L	0.5	8260/1
Carbon Tetrachloride	ND	ug/L	0.5	8260/1
Chlorobenzene	ND	ug/L	0.5	8260/1
Chloroethane	ND	ug/L	0.5	8260/1
Chloroform	ND	ug/L	0.5	8260/1
Chloromethane	ND	ug/L	0.5	8260/1
2-Chlorotoluene	ND	ug/L	0.5	8260/1
4-Chlorotoluene	ND	ug/L	0.5	8260/1
Dibromochloromethane	ND	ug/L	0.5	8260/1
1,2-Dibromo-3-Chloropropane (DBCP)	ND	ug/L	0.5	8260/1
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	8260/1
Dibromomethane	ND	ug/L	0.5	8260/1
1,2-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,3-Dichlorobenzene	ND	ug/L	0.5	8260/1
1,4-Dichlorobenzene	ND	ug/L	0.5	8260/1
Dichlorodifluoromethane	ND	ug/L	0.5	8260/1
1,1-Dichloroethane	ND	ug/L	0.5	8260/1
1,2-Dichloroethane	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 15:11:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

mg/L : milligrams per Liter (parts per million)
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Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-13
Sampled by Client

Laboratory No: 0012133-13
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
1,1-Dichloroethene	ND	ug/L	0.5	8260/1
cis-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
trans-1,2-Dichloroethene	ND	ug/L	0.5	8260/1
1,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,3-Dichloropropane	ND	ug/L	0.5	8260/1
2,2-Dichloropropane	ND	ug/L	0.5	8260/1
1,1-Dichloropene	ND	ug/L	0.5	8260/1
cis-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
trans-1,3-Dichloropropene	ND	ug/L	0.5	8260/1
Ethylbenzene	ND	ug/L	0.5	8260/1
Hexachlorobutadiene	ND	ug/L	0.5	8260/1
Isopropylbenzene	ND	ug/L	0.5	8260/1
p-Isopropyltoluene	ND	ug/L	0.5	8260/1
Methylene Chloride	ND	ug/L	5.0	8260/1
Methyl tert-Butyl Ether (MTBE)	12.1	ug/L	0.5	8260/1
Naphthalene	ND	ug/L	0.5	8260/1
n-Propylbenzene	ND	ug/L	0.5	8260/1
Styrene	ND	ug/L	0.5	8260/1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	8260/1
Tetrachloroethene	ND	ug/L	0.5	8260/1
Toluene	ND	ug/L	0.5	8260/1
1,2,3-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,2,4-Trichlorobenzene	ND	ug/L	0.5	8260/1
1,1,1-Trichloroethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloroethane	ND	ug/L	0.5	8260/1
Trichloroethene	ND	ug/L	0.5	8260/1

Analyzed : 12/14/00 15:11:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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ug/L : micrograms per Liter (parts per billion)
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(661) 395-0539
FAX (661) 395-3069

B C Laboratories Inc
4100 Atlas Court
Bakersfield, CA 93308

Attention: Michelle Buttram

Sample Type: Water

Description: 00-14119-13
Sampled by Client

Laboratory No: 0012133-13
Date Received: 12/08/00
Date Reported: 12/20/00
Contract No. :
Date Sampled : 12/06/00
Time Sampled :

REPORT OF ANALYTICAL RESULTS

Constituents	Results	Units	DLR	Method/Ref
Trichlorofluoromethane	ND	ug/L	0.5	8260/1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	0.5	8260/1
1,2,3-Trichloropropane	ND	ug/L	0.5	8260/1
1,2,4-Trimethylbenzene	ND	ug/L	0.5	8260/1
1,3,5-Trimethylbenzene	ND	ug/L	0.5	8260/1
Vinyl chloride	ND	ug/L	0.5	8260/1
Total Xylenes	ND	ug/L	1.0	8260/1

Analyzed : 12/14/00 15:11:00 SVM

cc:

Jim Etherton, Lab Operations Manager

Method Reference
1. EPA SW-846, 1994 3rd Edition

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/02/2001
Sample Matrix: Water
QC Batch ID: 200014119-6*WATER

Samples Affected: 00-14119-6 - 00-14119-10

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Total Calcium	TOTAL-14119-1	124.9	124.0	127.4	127.0	10.00	10.00	mg/L	1.	0.	20	H MEAN	H MEAN	75 - 125
Total Magnesium	TOTAL-14119-1	71.20	70.78	77.02	76.72	10.00	10.00	mg/L	1.	0.	20	H MEAN	H MEAN	75 - 125
Total Sodium	TOTAL-14119-1	203.8	202.2	203.2	202.8	10.00	10.00	mg/L	1.	0.	20	H MEAN	H MEAN	75 - 125
Sulfate	14119-8	184.8	184.2	284.6	282.6	100.0	100.0	mg/L	0.	1.	10	100.	98.	80 - 120
Chloride	14119-8	105.3	105.1	207.1	206.0	100.0	100.0	mg/L	0.	1.	10	102.	101.	80 - 120
Nitrate as N	14119-8	< 0.1	< 0.1	4.920	4.908	5.000	5.000	mg/L	<PQL	0.	10	98.	98.	80 - 120
pH	14119-1	7.39	7.41					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	14119-1	1400.	1380.					mg/L	1.		10			
Total Cyanide	W-TOTAL-14119-	< 0.02	< 0.02	0.2471	0.2471	0.2500	0.2500	mg/L	<PQL	0.	10	99.	99.	90 - 110
Total Sulfide	14119-6	< 0.1	< 0.1					mg/L	<PQL		10			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/04/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*WATER

Samples Affected: 00-14119-1 - 00-14119-5

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Total Calcium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Magnesium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Sodium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Sulfate	N.A.	12/08/2000	MMT	EPA-300.0	12/08/2000	MMT
Chloride	N.A.	12/08/2000	MMT	EPA-300.0	12/08/2000	MMT
Nitrate as N	N.A.	12/08/2000	MMT	EPA-300.0	12/08/2000	MMT
pH	N.A.	12/08/2000	JKS	EPA-9040	12/08/2000	JKS
Total Dissolved Solids @ 180 C	N.A.	12/11/2000	HPR	EPA-160.1	12/11/2000	HPR
Total Cyanide	EPA-9010	12/14/2000	ZJH	EPA-9010	12/14/2000	TDC
Total Sulfide	EPA-9030	12/11/2000	NSC	EPA-9030	12/11/2000	NSC

Quality Control Officer

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B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/02/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*WATER

Samples Affected: 00-14119-1 - 00-14119-5

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Total Calcium	TOTAL-14119-1	124.9	124.0	127.4	127.0	10.00	10.00	mg/L	1.	0.	20	H MEAN	H MEAN	75 - 125
Total Magnesium	TOTAL-14119-1	71.20	70.78	77.02	76.72	10.00	10.00	mg/L	1.	0.	20	H MEAN	H MEAN	75 - 125
Total Sodium	TOTAL-14119-1	203.8	202.2	203.2	202.8	10.00	10.00	mg/L	1.	0.	20	H MEAN	H MEAN	75 - 125
Sulfate	14119-8	184.8	184.2	284.6	282.6	100.0	100.0	mg/L	0.	1.	10	100.	98.	80 - 120
Chloride	14119-8	105.3	105.1	207.1	206.0	100.0	100.0	mg/L	0.	1.	10	102.	101.	80 - 120
Nitrate as N	14119-8	< 0.1	< 0.1	4.920	4.908	5.000	5.000	mg/L	<PQL	0.	10	98.	98.	80 - 120
pH	14119-1	7.39	7.41					pH Units	0.		± .1 PH UN			
Total Dissolved Solids @ 180 C	14119-1	1400.	1380.					mg/L	1.		10			
Total Cyanide	W-TOTAL-14119-	< 0.02	< 0.02	0.2471	0.2471	0.2500	0.2500	mg/L	<PQL	0.	10	99.	99.	90 - 110
Total Sulfide	14001-1	< 0.1	< 0.1					mg/L	<PQL		10			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

H Mean - sample concentration is greater than four times the spike level.

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
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GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/04/2001
Sample Matrix: Water
QC Batch ID: 200014119-6*WATER

Samples Affected: 00-14119-6 - 00-14119-10

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Total Calcium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Magnesium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Sodium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Sulfate	N.A.	12/08/2000	MMT	EPA-300.0	12/08/2000	MMT
Chloride	N.A.	12/08/2000	MMT	EPA-300.0	12/08/2000	MMT
Nitrate as N	N.A.	12/08/2000	MMT	EPA-300.0	12/08/2000	MMT
pH	N.A.	12/08/2000	JKS	EPA-9040	12/08/2000	JKS
Total Dissolved Solids @ 180 C	N.A.	12/11/2000	HPR	EPA-160.1	12/11/2000	HPR
Total Cyanide	EPA-9010	12/14/2000	ZJH	EPA-9010	12/14/2000	TDC
Total Sulfide	EPA-9030	12/11/2000	NSC	EPA-9030	12/11/2000	NSC

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
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GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/09/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*METAL

Samples Affected: 00-14119-1 - 00-14419-10

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Total Antimony	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Arsenic	EPA-3020	12/12/2000	ELN	EPA-7060	12/22/2000	TMS
Total Barium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Beryllium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Cadmium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Chromium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Cobalt	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Copper	EPA-3010	12/13/2000	ELN	EPA-6010	12/17/2000	BDG
Total Lead	EPA-3020	12/12/2000	ELN	EPA-7421	12/21/2000	TMS
Total Mercury	EPA-7470	12/12/2000	JWH2	EPA-7470	12/13/2000	PAP
Total Nickel	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Selenium	EPA-3020	12/12/2000	ELN	EPA-7740	12/22/2000	TMS
Total Silver	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Thallium	EPA-3010	12/13/2000	ELN	EPA-6010	12/15/2000	ARD
Total Vanadium	EPA-3010	12/13/2000	ELN	EPA-6010	12/14/2000	ARD
Total Zinc	EPA-3010	12/13/2000	ELN	EPA-6010	12/15/2000	ARD

Quality Control Officer

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QUALITY CONTROL REPORT
(Precision & Accuracy)

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/09/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*METAL

Samples Affected: 00-14119-1 - 00-14419-10

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Total Antimony	TOTAL-14119-1	<100.	<100.	386.2	405.6	400.0	400.0	µg/L	<PQL	5.	20	94.	99.	75 - 125
Total Arsenic	TOTAL-14119-1	1.011	0.748	19.81	20.69	20.00	20.00	µg/L	<PQL	4.	20	94.	98.	80 - 120
Total Barium	TOTAL-14119-1	52.60	51.50	229.4	229.8	200.0	200.0	µg/L	<PQL	0.	20	88.	89.	75 - 125
Total Beryllium	TOTAL-14119-1	< 10.	< 10.	173.0	172.8	200.0	200.0	µg/L	<PQL	0.	20	87.	87.	75 - 125
Total Cadmium	TOTAL-14119-1	< 10.	< 10.	181.3	180.7	200.0	200.0	µg/L	<PQL	0.	20	92.	91.	75 - 125
Total Chromium	TOTAL-14119-1	< 10.	5.500	181.2	182.3	200.0	200.0	µg/L	<PQL	1.	20	89.	90.	75 - 125
Total Cobalt	TOTAL-14119-1	< 50.	< 50.	181.1	180.9	200.0	200.0	µg/L	<PQL	0.	20	90.	90.	75 - 125
Total Copper	TOTAL-14119-1	5.400	6.900	193.3	197.6	200.0	200.0	µg/L	<PQL	2.	20	94.	96.	75 - 125
Total Lead	TOTAL-14119-1	< 5.	< 5.	21.11	21.18	20.00	20.00	µg/L	<PQL	0.	20	104.	104.	80 - 120
Total Mercury	TOTAL-14119-1	< 0.2	< 0.2	1.027	1.027	1.000	1.000	µg/L	<PQL	0.	20	104.	104.	70 - 130
Total Nickel	TOTAL-14119-1	< 10.	< 10.	353.7	356.4	400.0	400.0	µg/L	<PQL	1.	20	88.	89.	75 - 125
Total Selenium	TOTAL-14119-1	2.824	2.222	18.10	17.65	20.00	20.00	µg/L	<PQL	3.	20	76.	74.	80 - 120
Total Silver	TOTAL-14119-1	4.000	6.200	186.7	191.9	200.0	200.0	µg/L	<PQL	3.	20	91.	94.	75 - 125
Total Thallium	TOTAL-14119-1	<100.	<100.	352.9	352.4	400.0	400.0	µg/L	<PQL	0.	20	92.	92.	75 - 125
Total Vanadium	TOTAL-14119-1	44.00	46.00	226.6	227.4	200.0	200.0	µg/L	<PQL	0.	20	91.	92.	75 - 125
Total Zinc	TOTAL-14119-1	8.500	7.800	184.8	195.8	200.0	200.0	µg/L	<PQL	6.	20	88.	94.	75 - 125

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

The matrix spike recoveries for Total Selenium are outside QC limits.

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8150

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/31/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8150

Samples Affected: 00-14119-1 - 00-14119-10

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8150 compounds	EPA-3510	12/08/2000	SLM/YP	EPA-8150	12/28/2000	KMS

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8150

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/31/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8150

Samples Affected: 00-14119-1 - 00-14119-10

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
2,4-D	MS 12/8	< 0.4	2.153	2.221	2.000	2.000	µg/L	3.	30	108.	111.	48 - 213
Dinoseb	MS 12/8	< 0.2	0.657	0.685	1.000	1.000	µg/L	4.	30	66.	68.	1 - 85
2,4,5-T	MS 12/8	< 0.09	0.563	0.585	0.600	0.600	µg/L	4.	30	94.	98.	41 - 226
2,4,5-TP (Silvex)	MS 12/8	< 0.07	0.718	0.730	0.600	0.600	µg/L	2.	30	120.	122.	66 - 166

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/31/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8270

Samples Affected: 00-14119-1 - 00-14119-9

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	MS 12/8	< 2.	60.	58.	80.	80.	µg/L	3.	15	74.	72.	65 - 118
1,4-Dichlorobenzene	MS 12/8	< 2.	56.	49.	80.	80.	µg/L	14.	24	70.	61.	59 - 115
2,4-Dinitrotoluene	MS 12/8	< 2.	64.	67.	80.	80.	µg/L	4.	14	80.	84.	65 - 138
Hexachlorobenzene	MS 12/8	< 2.	67.	68.	80.	80.	µg/L	2.	20	83.	85.	68 - 149
Hexachlorobutadiene	MS 12/8	< 2.	47.	40.	80.	80.	µg/L	16.	30	59.	50.	43 - 121
Hexachloroethane	MS 12/8	< 2.	51.	42.	80.	80.	µg/L	20.	30	64.	53.	41 - 121
Nitrobenzene	MS 12/8	< 2.	61.	62.	80.	80.	µg/L	1.	20	76.	77.	66 - 114
N-Nitrosodi-n-propylamine	MS 12/8	< 2.	61.	63.	80.	80.	µg/L	2.	17	77.	78.	59 - 116
Pyrene	MS 12/8	< 2.	69.	69.	80.	80.	µg/L	0.	20	86.	86.	52 - 144
1,2,4-Trichlorobenzene	MS 12/8	< 2.	57.	49.	80.	80.	µg/L	14.	23	71.	62.	56 - 120
4-Chloro-3-methylphenol	MS 12/8	< 5.	69.	70.	80.	80.	µg/L	2.	30	86.	88.	69 - 133
2-Chlorophenol	MS 12/8	< 2.	67.	68.	80.	80.	µg/L	1.	16	84.	85.	71 - 116
2-Methylphenol	MS 12/8	< 2.	64.	64.	80.	80.	µg/L	1.	20	80.	80.	65 - 122
3- & 4-Methylphenol	MS 12/8	< 2.	53.	55.	80.	80.	µg/L	3.	15	67.	69.	55 - 111
4-Nitrophenol	MS 12/8	< 2.	34.	34.	80.	80.	µg/L	0.	29	43.	42.	23 - 70
Pentachlorophenol	MS 12/8	< 10.	66.	65.	80.	80.	µg/L	1.	20	83.	82.	65 - 160
Phenol	MS 12/8	< 2.	39.	38.	80.	80.	µg/L	3.	25	49.	48.	34 - 63
2,4,6-Trichlorophenol	MS 12/8	< 5.	66.	66.	80.	80.	µg/L	0.	20	82.	82.	63 - 129

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/31/2001
Sample Matrix: Water
QC Batch ID: 200014119-10*8270

Samples Affected: 00-14119-10

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	MS 12/12	< 2.	65.	65.	80.	80.	µg/L	1.	15	82.	81.	65 - 118
1,4-Dichlorobenzene	MS 12/12	< 2.	64.	65.	80.	80.	µg/L	2.	24	80.	82.	59 - 115
2,4-Dinitrotoluene	MS 12/12	< 2.	69.	68.	80.	80.	µg/L	1.	14	86.	86.	65 - 138
Hexachlorobenzene	MS 12/12	< 2.	78.	76.	80.	80.	µg/L	2.	20	98.	95.	68 - 149
Hexachlorobutadiene	MS 12/12	< 2.	64.	63.	80.	80.	µg/L	2.	30	80.	79.	43 - 121
Hexachloroethane	MS 12/12	< 2.	71.	72.	80.	80.	µg/L	0.	30	89.	90.	41 - 121
Nitrobenzene	MS 12/12	< 2.	66.	64.	80.	80.	µg/L	3.	20	82.	80.	66 - 114
N-Nitrosodi-n-propylamine	MS 12/12	< 2.	64.	64.	80.	80.	µg/L	0.	17	81.	80.	59 - 116
Pyrene	MS 12/12	< 2.	76.	77.	80.	80.	µg/L	1.	20	95.	96.	52 - 144
1,2,4-Trichlorobenzene	MS 12/12	< 2.	66.	66.	80.	80.	µg/L	1.	23	83.	82.	56 - 120
4-Chloro-3-methylphenol	MS 12/12	< 5.	75.	74.	80.	80.	µg/L	2.	30	94.	92.	69 - 133
2-Chlorophenol	MS 12/12	< 2.	70.	70.	80.	80.	µg/L	0.	16	87.	87.	71 - 116
2-Methylphenol	MS 12/12	< 2.	66.	67.	80.	80.	µg/L	0.	20	83.	83.	65 - 122
3- & 4-Methylphenol	MS 12/12	< 2.	57.	57.	80.	80.	µg/L	1.	15	72.	71.	55 - 111
4-Nitrophenol	MS 12/12	< 2.	37.	37.	80.	80.	µg/L	0.	29	46.	46.	23 - 70
Pentachlorophenol	MS 12/12	< 10.	86.	85.	80.	80.	µg/L	1.	20	107.	106.	65 - 160
Phenol	MS 12/12	< 2.	39.	40.	80.	80.	µg/L	1.	25	49.	50.	34 - 63
2,4,6-Trichlorophenol	MS 12/12	< 5.	69.	69.	80.	80.	µg/L	1.	20	87.	86.	63 - 129

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer

Danette Bohm

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/31/2001
Sample Matrix: Water
QC Batch ID: 200014119-10*8270

Samples Affected: 00-14119-10

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 compounds	EPA-3510	12/12/2000	JCM	EPA-8270	12/20/2000	SKC

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/31/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8270

Samples Affected: 00-14119-1 - 00-14119-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 compounds	EPA-3510	12/08/2000	JCM	EPA-8270	12/18/2000	SKC

Quality Control Officer

Danette Bohm

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QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/18/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8270

Samples Affected: 00-14119-1 - 00-14119-9

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8270 compounds	EPA-3510	12/08/2000	JCM	EPA-8270	12/18/2000	SKC

Quality Control Officer

Danette Bohm

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8270

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/18/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8270

Samples Affected: 00-14119-1 - 00-14119-9

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Acenaphthene	MS 12/8	< 2.	60.	58.	80.	80.	µg/L	3.	15	74.	72.	65 - 118
1,4-Dichlorobenzene	MS 12/8	< 2.	56.	49.	80.	80.	µg/L	14.	24	70.	61.	59 - 115
2,4-Dinitrotoluene	MS 12/8	< 2.	64.	67.	80.	80.	µg/L	4.	14	80.	84.	65 - 138
Hexachlorobenzene	MS 12/8	< 2.	67.	68.	80.	80.	µg/L	2.	20	83.	85.	68 - 149
Hexachlorobutadiene	MS 12/8	< 2.	47.	40.	80.	80.	µg/L	16.	30	59.	50.	43 - 121
Hexachloroethane	MS 12/8	< 2.	51.	42.	80.	80.	µg/L	20.	30	64.	53.	41 - 121
Nitrobenzene	MS 12/8	< 2.	61.	62.	80.	80.	µg/L	1.	20	76.	77.	66 - 114
N-Nitrosodi-n-propylamine	MS 12/8	< 2.	61.	63.	80.	80.	µg/L	2.	17	77.	78.	59 - 116
Pyrene	MS 12/8	< 2.	69.	69.	80.	80.	µg/L	0.	20	86.	86.	52 - 144
1,2,4-Trichlorobenzene	MS 12/8	< 2.	57.	49.	80.	80.	µg/L	14.	23	71.	62.	56 - 120
4-Chloro-3-methylphenol	MS 12/8	< 5.	69.	70.	80.	80.	µg/L	2.	30	86.	88.	69 - 133
2-Chlorophenol	MS 12/8	< 2.	67.	68.	80.	80.	µg/L	1.	16	84.	85.	71 - 116
2-Methylphenol	MS 12/8	< 2.	64.	64.	80.	80.	µg/L	1.	20	80.	80.	65 - 122
3- & 4-Methylphenol	MS 12/8	< 2.	53.	55.	80.	80.	µg/L	3.	15	67.	69.	55 - 111
4-Nitrophenol	MS 12/8	< 2.	34.	34.	80.	80.	µg/L	0.	29	43.	42.	23 - 70
Pentachlorophenol	MS 12/8	< 10.	66.	65.	80.	80.	µg/L	1.	20	83.	82.	65 - 160
Phenol	MS 12/8	< 2.	39.	38.	80.	80.	µg/L	3.	25	49.	48.	34 - 63
2,4,6-Trichlorophenol	MS 12/8	< 5.	66.	66.	80.	80.	µg/L	0.	20	82.	82.	63 - 129

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

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B C LABORATORIES
QUALITY CONTROL REPORT
(Preparation & Analysis Information)
Method 8080

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/18/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8080

Samples Affected: 00-14119-1 - 00-14119-10

Constituents	Preparation Method	Preparation Date	Preparation Technician	Analytical Method	Run Date	Analyst
Method 8080 compounds	EPA-3510	12/12/2000	SLM	EPA-8080	12/15/2000	RKJ

Quality Control Officer

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BC Laboratories, Inc

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
Method 8080

GEOLOGIC ASSOCIATES
16885 W BERNARDO DRIVE, SUITE 305
SAN DIEGO, CA 92127
SARAH BATTELLE

Date of Report: 01/18/2001
Sample Matrix: Water
QC Batch ID: 200014119-1*8080

Samples Affected: 00-14119-1 - 00-14119-10

Constituents	QC Sample ID	Sample Result	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Aldrin	MS 12/12	< 0.005	0.207	0.211	0.250	0.250	µg/L	2.	22	83.	85.	60 - 118
gamma-BHC	MS 12/12	< 0.005	0.157	0.167	0.250	0.250	µg/L	6.	20	63.	67.	61 - 116
4,4'-DDT	MS 12/12	< 0.005	0.232	0.230	0.250	0.250	µg/L	1.	24	93.	92.	66 - 130
Dieldrin	MS 12/12	< 0.005	0.203	0.215	0.250	0.250	µg/L	6.	23	81.	86.	66 - 129
Endrin	MS 12/12	< 0.005	0.217	0.228	0.250	0.250	µg/L	4.	25	87.	91.	64 - 137
Heptachlor	MS 12/12	< 0.005	0.189	0.200	0.250	0.250	µg/L	5.	24	76.	80.	67 - 114

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

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BAS

BRYAN A. STIRRAT & ASSOCIATES

CHAIN OF CUSTODY

EB11260

PROJECT INFORMATION

PROJECT NAME: Gregory Canyon

JOB NUMBER:

PROJECT MANAGER: Greg Acosta

LABORATORY: Southland Tech. Services, Inc

SHIPMENT METHOD: Lab Courier

TURNAROUND TIME:

DISPOSAL: Lab Disposal [ ] Return [ ] Pick Up [ ]

BAS Sample I.D.	LAB I.D.	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CHLORIDE, SULFATE, NITRATE (N), TDS	Metals (Ca, Mg, Na)	CAM METALS (FULL 17 COC SUITE (EXCLUDING MO) + TIN	8260 (VOC'S) INCLUDING ISOBUTYL ALCOHOL	8270 (SVOC'S INCLUDING PHENOLS	Cyanide, SULFIDE	8150 (CHLORINATED HERBICIDES)	8080 (ORGANOCHLORINE PESTICIDES & PCB'S
GLA-5	EB1260-1	12-11-01	1330	GW	9	X	X	X	X	X	X	X	X
GLA-DUP	-2	↓	—	GW	4	X	X		X				
EQUIP. BLANK	-3	↓	—	W	1				X				
FIELD BLANK	-4	↓	—	↓	1				X				
TRIP BLANK	-5	↓	—	↓	1				X				

Ricardo Ramirez 12-11-01 1530 [signature] 12/12/01

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

SAMPLE CONDITION (Lab Initials)

Shipping Container:

Sealed _____

Sample(s):

Integrity _____

Chilled _____

Sealed _____

COMMENTS:

1360 Valley Vista Drive, Diamond Bar, CA 91765 (909) 860-7777 FAX (909) 860-8017

Original to accompany lab report Copy 1 – Lab Copy 2 – Originator

Southland Technical Services, Inc.
Environmental Laboratories

7801 Telegraph Road, Suite L
Montebello, CA 90640

Phone (323) 888-0728
Fax (323) 888-1509

GENERAL MINERAL ANALYSIS

Client Name	: *BAS/Gregory Canyon*		Date Sampled	:	12/11/2001
Matrix	: Groundwater		Date Received	:	12/12/2001
Client ID	: GLA-5		Date Analyzed	:	12/12-17/2001
STS I.D.	: EB11260-01		Date Reported	:	12/26/2001

Sample Analysis	EPA Method	Unit	MDL	PQL	Result
Nitrate, Nitrogen	353.3	mg/L	0.01	0.05	**1.94**
Cyanide	335.2	mg/L	0.02	0.1	**ND**
Sulfide	376.1	mg/L	0.1	0.5	**ND**
Chloride	325.3	mg/L	0.05	0.1	**147**
Sulfate	375.4	mg/L	1.0	2	**203**
Total Dissolved Solid	160.1	mg/L	2	10	**1650**

Key: ND = Not Detected MDL = Method Detection Limit PQL = Practical Quantitation Limit

NA = Sample was not analyzed for this parameter during the specified sampling round.

J = Trace concentration was between MDL and PQL

Southland Technical Services, Inc.

Ellis Hsue
Laboratory Manager

Roger Wang, Ph.D.
Laboratory Director

Southland Technical Services, Inc.
Environmental Laboratories

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GENERAL MINERAL ANALYSIS

Client Name	: *BAS/Gregory Canyon*		**Date Sampled**	:	12/11/2001
Matrix	: Groundwater		**Date Received**	:	12/12/2001
Client ID	: GLA-5Duplicate		**Date Analyzed**	:	12/12-17/2001
STS I.D.	: EB11260-02		**Date Reported**	:	12/26/2001

Sample Analysis	EPA Method	Unit	MDL	PQL	Result
Nitrate, Nitrogen	353.3	mg/L	0.01	0.05	**1.76**
Cyanide	335.2	mg/L	0.02	0.1	**ND**
Sulfide	376.1	mg/L	0.1	0.5	**ND**
Chloride	325.3	mg/L	0.05	0.1	**150**
Sulfate	375.4	mg/L	1.0	2	**179**
Total Dissolved Solid	160.1	mg/L	2	10	**1575**

Key: ND = Not Detected MDL = Method Detection Limit PQL = Practical Quantitation Limit

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METAL ANALYSIS

Client Name	: *BAS/Gregory Canyon*		**Date Sampled**	:	12/11/2001
Matrix	: Groundwater		**Date Received**	:	12/12/2001
Client ID	: GLA-5Dup		**Date Analyzed**	:	12/17-22/01
STS I.D.	: EB11260-02		**Date Reported**	:	12/28/2001

Sample Analysis	EPA Method	Unit	MDL	PQL	Result
Ca	7140	mg/L	0.1	1	**17.0**
Mg	7450	mg/L	0.10	0.1	**68**
Na	7770	mg/L	0.1	1	**158**

Key: ND = Not Detected MDL = Method Detection Limit PQL = Practical Quantitation Limit
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J = Trace concentration was between MDL and PQL.

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METAL ANALYSIS

Client Name	:	*BAS/Gregory Canyon*	Date Sampled	:	12/11/2001
Matrix	:	Groundwater	Date Received	:	12/12/2001
Client ID	:	GLA-5	Date Analyzed	:	12/17-22/01
STS I.D.	:	EB11260-01	Date Reported	:	12/28/2001

Sample Analysis	EPA Method	Unit	MDL	PQL	Result
Sb	7040	mg/L	0.01	0.02	ND
As	7060	mg/L	0.005	0.01	ND
Ba	7081	mg/L	0.005	0.01	ND
Be	7090	mg/L	0.002	0.005	ND
Cd	7150	mg/L	0.04	0.05	ND
Cr	7190	mg/L	0.02	0.05	ND
Sn	7870	mg/L	0.05	0.05	ND
Cu	7210	mg/L	0.005	0.01	ND
Pb	7421	mg/L	0.002	0.005	ND
Hg	7450	mg/L	0.001	0.002	ND
Ni	7520	mg/L	0.04	0.05	ND
Se	7740	mg/L	0.005	0.01	ND
Ag	7760	mg/L	0.005	0.01	ND
Tl	7840	mg/L	0.01	0.02	ND
V	7911	mg/L	0.02	0.05	ND
Zn	7950	mg/L	0.01	0.02	ND
Ca	7140	mg/L	0.1	1	**19.1**
Mg	7450	mg/L	0.10	0.1	**74**
Na	7770	mg/L	0.1	1	**165**

Key: ND = Not Detected MDL = Method Detection Limit PQL = Practical Quantitation Limit
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J = Trace concentration was between MDL and PQL.

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LABORATORY ANALYSIS

Client Name : **BAS/Gregory Canyon**
Type : **Grab**
Matrix : **water**
Unit **ug / l**

Date sampled : **12/11/2001**
Date received : **12/12/2001**
Date analyzed : **12/17/2001**
Date reported : **1/2/2002**

ORGANOCHLORINE PESTICIDES AND PCBS by EPA 8080

Client ID	Method Blank	GLA-5	**MDL**	**PQL**
STS ID	121701Blk	EB1260-01		
Dilution Factor	1	1		
Alpha BHC	ND	ND	0.37	1.0
Beta BHC	ND	ND	0.25	1.0
Gamma BHC	ND	ND	0.36	1.0
Delta BHC	ND	ND	0.92	1.0
Heptachlor	ND	ND	0.59	1.0
Aldrin	ND	ND	0.36	1.0
Heptachlor Epoxide	ND	ND	0.28	1.0
Endosulfan I	ND	ND	0.22	1.0
Dieldrin	ND	ND	0.30	1.0
DDE	ND	ND	0.31	1.0
Endrin	ND	ND	0.16	1.0
Endosulfan II	ND	ND	0.31	1.0
Endrin Aldehyde	ND	ND	0.40	1.0
DDD	ND	ND	0.38	1.0
Endosulfan Sulfate	ND	ND	0.31	1.0
DDT	ND	ND	0.33	1.0
Methoxychlor	ND	ND	0.54	1.0
Endrin Ketone	ND	ND	0.50	1.0
Aroclor 1016	ND	ND	0.65	6.5
Aroclor 1221	ND	ND	1.30	6.5
Aroclor 1232	ND	ND	0.65	6.5
Aroclor 1242	ND	ND	0.65	6.5
Aroclor 1248	ND	ND	0.65	6.5
Aroclor 1254	ND	ND	0.65	6.5
Aroclor 1260	ND	ND	0.65	6.5
Chlordane	ND	ND	0.14	1.4
Toxaphene	ND	ND	2.4	8.0
Surrogate	**Surrogate % Recovery**		**APR**	
Tetrachloro-m-xylene	90	100	70-125	
Decachlorobiphenyl	92	106	70-125	

Key: M.B.=Method Blank, **ND**=Not Detected, **MDL** = Method Detection Limit, **PQL** = Pratical Quantitation Limit.

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LABORATORY ANALYSIS

Client Name : **BAS / Gregory Canyon**
Type : **Grab**
Matrix : **Soil**
Unit: **ug/L**

Date sampled : **12/11/2001**
Date received : **12/12/2001**
Date analyzed : **12/17/2001**
Date reported : **1/2/2002**

EPA 8080 Matrix Spike Recovery

Compound	Sample onc µg/k	Spike Added µg/kg	Spike Res µg/k	Dup Res µg/kg	Spike %Rec	Dup %Rec	RPD %	QC Limit RPD	QC Limit % Rec
Gamma BHC	0	20	46	48	230	240	4	20	46-127
Heptachlor	0	20	46	47	230	235	2	20	31-134
Aldrin	0	20	44	47	220	235	7	20	36-132
Dieldrin	0	20	40	42	200	210	5	20	21-134
Endrin	0	20	34	32	170	160	6	20	42-139
4, 4'-DDT	0	20	44	38	220	190	15	20	21-134

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LABORATORY ANALYSIS

Client Name :BAS
Sample Site Gregory Canyon
Matrix :Groundwater
Unit : ug/L

Date sampled: 12/11/01
Date received: 12/12/01
Date analyzed:12/21/01
Date reported :01/02/02

ORGANOCHLORINE HERBICIDES BY EPA 8150

Client ID	M. B.	GLA-5		
Lab's ID	MB122101	EB1260-01	MDL	DLR
Dalapon	ND	ND	5.1	51
Dicamba	ND	ND	0.27	2.7
MCPP	ND	ND	192	1920
MCPA	ND	ND	249	2490
Dichlorprop	ND	ND	0.65	6.5
2,4-D	ND	ND	1.2	12
Dinoseb	ND	ND	0.07	0.7
2,4,5-TP	ND	ND	0.17	1.7
2,4,5-T	ND	ND	0.20	2
2,4-DB	ND	ND	0.91	9.1
Surrogate	**Surrogate % Recovery**		**Accept. % Rec.**	
2,4-Dichlorophenylacetic acid	69	86	50-125	

Key: M.B.=Method Blank, **ND**=Not Detected, **MDL** = Method Detection Limit, **PQL** = Pratical Quantitation Limit.
J = Trace Conc. Between MDL and PQL

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LABORATORY ANALYSIS

Client Name : BAS/Gregory Canyon
Sample Type : Grab
Matrix : Groundwater
Unit : µg/L

Date Sampled : 12/11/01
Date Received : 12/12/01
Data Analysis : 12/12/01
Date Reported : 12/26/01

VOLATILE ORGANICS BY EPA 8260B (GC/MS)

Client ID	Method Blank	GLA-5	GLA Dup	**MDL**	**PQL**
STS Lab ID	1212BLK	EB1260-01	EB1260-02		
Dilution Factor	1	1	1		
Dichlorodifluoromethane	ND	ND	ND	0.54	1.0
Chloromethane	ND	ND	ND	0.34	0.5
Vinyl chloride	ND	ND	ND	0.39	0.5
Bromomethane	ND	ND	ND	0.46	0.5
Chloroethane	ND	ND	ND	0.40	1.0
Trichlorofluoromethane	ND	ND	ND	0.33	0.5
1,1-Dichloroethene	ND	ND	ND	0.43	0.5
Methylene chloride	ND	ND	ND	0.91	1.0
trans-1,2-Dichloroethene	ND	ND	ND	0.52	1.0
1,1-Dichloroethane	ND	ND	ND	0.33	0.5
2,2-Dichloropropane	ND	ND	ND	0.66	1.0
cis-1,2-Dichloroethene	ND	ND	ND	0.82	0.5
MTBE	ND	ND	ND	0.30	0.5
Chloroform	ND	ND	ND	0.28	1.0
Bromochloromethane	ND	ND	ND	0.34	0.5
1,1,1-Trichloroethane	ND	ND	ND	0.29	0.5
1,1-Dichloropropene	ND	ND	ND	0.37	0.5
Carbon tetrachloride	ND	ND	ND	0.30	0.5
1,2-Dichloroethane	ND	ND	ND	0.33	0.5
Benzene	ND	ND	ND	0.25	0.5
Trichloroethene	ND	ND	ND	0.45	0.5
1,2-Dichloropropane	ND	ND	ND	0.29	0.5
Bromodichloromethane	ND	ND	ND	0.32	0.5
Dibromomethane	ND	ND	ND	0.41	0.5
cis-1,3-Dichloropropene	ND	ND	ND	0.34	0.5
Toluene	ND	ND	ND	0.24	0.5
trans-1,3-Dichloropropene	ND	ND	ND	0.37	0.5
1,1,2-Trichloroethane	ND	ND	ND	0.38	0.5
1,3-Dichloropropane	ND	ND	ND	0.38	0.5
Tetrachloroethene	ND	ND	ND	0.25	0.5
Dibromochloromethane	ND	ND	ND	0.29	0.5
1,2-Dibromoethane	ND	ND	ND	0.27	0.5
Chlorobenzene	ND	ND	ND	0.20	0.5

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Client Name : BAS/Gregory Canyon **Date Sampled : 12/11/01**

Volatile Organics Analysis (continued)

Client ID	Method Blank	GLA-5	GLA Dup	MDL	PQL
1,1,1,2-Tetrachloroethane	ND	ND	ND	0.20	0.5
Ethylbenzene	ND	ND	ND	0.24	0.5
p + m-Xylene	ND	ND	ND	0.60	1.0
o-Xylene	ND	ND	ND	0.23	0.5
Styrene	ND	ND	ND	0.31	0.5
Isopropylbenzene	ND	ND	ND	0.25	0.5
Bromoform	ND	ND	ND	0.27	0.5
1,1,2,2-Tetrachloroethane	ND	ND	ND	0.22	0.5
1,2,3-Trichloropropane	ND	ND	ND	0.43	1.0
n-Propylbenzene	ND	ND	ND	0.28	1.0
Bromobenzene	ND	ND	ND	0.23	0.5
1,3,5-Trimethylbenzene	ND	ND	ND	0.34	1.0
2-Chlorotoluene	ND	ND	ND	0.31	1.0
4-Chlorotoluene	ND	ND	ND	0.28	1.0
tert-Butylbenzene	ND	ND	ND	0.63	1.0
1,2,4-Trimethylbenzene	ND	ND	ND	0.30	1.0
sec-Butylbenzene	ND	ND	ND	0.31	1.0
4-Isopropyltoluene	ND	ND	ND	0.38	1.0
1,3-Dichlorobenzene	ND	ND	ND	0.21	1.0
1,4-Dichlorobenzene	ND	ND	ND	0.44	1.0
n-Butylbenzene	ND	ND	ND	0.37	1.0
1,2-Dichlorobenzene	ND	ND	ND	0.17	0.5
1,2-Dibromo-3-chloropropane	ND	ND	ND	0.95	1.0
1,2,4-Trichlorobenzene	ND	ND	ND	0.45	1.0
Hexachloro-1,3-butadiene	ND	ND	ND	0.38	1.0
Napthalene	ND	ND	ND	0.56	1.0
1,2,3-Trichlorobenzene	ND	ND	ND	0.36	0.5
System Monitoring Compounds	**Surrogate % Recovery**			**APR (%)**	
Dibromofluoromethane	109	100	97	80-120	
Toluene-d8	90	94	95	80-120	
4-Bromofluorobenzene	70	74	79	80-120	

Key: ND = Not Detected **MDL** = Method Detection Limit **PQL** = Practical Quantitation Limit **J** = Trace Conc. Between MDL and PQL

Southland Technical Services, Inc.

Ellis Hsue
Laboratory Manager

Roger Wang, Ph.D.
Laboratory Director

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LABORATORY ANALYSIS

Client Name : BAS/Gregory Canyon
Sample Type : Grab
Matrix : Groundwater
Unit : µg/L

Date Sampled : 12/11/01
Date Received : 12/12/01
Data Analysis : 12/12/01
Date Reported : 12/26/01

VOLATILE ORGANICS BY EPA 8260B (GC/MS)

Client ID	Method Blank	Equip Blk	Field Blk	Trip Blk		
STS Lab ID	1212BLK	EB1260-03	EB1260-04	EB1260-05	**MDL**	**PQL**
Dilution Factor	1	1	1	1		
Dichlorodifluoromethane	ND	ND	ND	ND	0.54	1.0
Chloromethane	ND	ND	ND	ND	0.34	0.5
Vinyl chloride	ND	ND	ND	ND	0.39	0.5
Bromomethane	ND	ND	ND	ND	0.46	0.5
Chloroethane	ND	ND	ND	ND	0.40	1.0
Trichlorofluoromethane	ND	ND	ND	ND	0.33	0.5
1,1-Dichloroethene	ND	ND	ND	ND	0.43	0.5
Methylene chloride	ND	ND	ND	ND	0.91	1.0
trans-1,2-Dichloroethene	ND	ND	ND	ND	0.52	1.0
1,1-Dichloroethane	ND	ND	ND	ND	0.33	0.5
2,2-Dichloropropane	ND	ND	ND	ND	0.66	1.0
cis-1,2-Dichloroethene	ND	ND	ND	ND	0.82	0.5
MTBE	ND	ND	ND	ND	0.30	0.5
Chloroform	ND	ND	ND	ND	0.28	1.0
Bromochloromethane	ND	ND	ND	ND	0.34	0.5
1,1,1-Trichloroethane	ND	ND	ND	ND	0.29	0.5
1,1-Dichloropropene	ND	ND	ND	ND	0.37	0.5
Carbon tetrachloride	ND	ND	ND	ND	0.30	0.5
1,2-Dichloroethane	ND	ND	ND	ND	0.33	0.5
Benzene	ND	ND	ND	ND	0.25	0.5
Trichloroethene	ND	ND	ND	ND	0.45	0.5
1,2-Dichloropropane	ND	ND	ND	ND	0.29	0.5
Bromodichloromethane	ND	ND	ND	ND	0.32	0.5
Dibromomethane	ND	ND	ND	ND	0.41	0.5
cis-1,3-Dichloropropene	ND	ND	ND	ND	0.34	0.5
Toluene	ND	ND	ND	ND	0.24	0.5
trans-1,3-Dichloropropene	ND	ND	ND	ND	0.37	0.5
1,1,2-Trichloroethane	ND	ND	ND	ND	0.38	0.5
1,3-Dichloropropane	ND	ND	ND	ND	0.38	0.5
Tetrachloroethene	ND	ND	ND	ND	0.25	0.5
Dibromochloromethane	ND	ND	ND	ND	0.29	0.5
1,2-Dibromoethane	ND	ND	ND	ND	0.27	0.5
Chlorobenzene	ND	ND	ND	ND	0.20	0.5

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Client Name : BAS/Gregory Canyon **Date Sampled : 12/11/01**

Volatile Organics Analysis (continued)

Client ID	Method Blank	Equip Blk	Field Blk	Trip Blk	MDL	PQL
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	0.20	0.5
Ethylbenzene	ND	ND	ND	ND	0.24	0.5
p + m-Xylene	ND	ND	ND	ND	0.60	1.0
o-Xylene	ND	ND	ND	ND	0.23	0.5
Styrene	ND	ND	ND	ND	0.31	0.5
Isopropylbenzene	ND	ND	ND	ND	0.25	0.5
Bromoform	ND	ND	ND	ND	0.27	0.5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.22	0.5
1,2,3-Trichloropropane	ND	ND	ND	ND	0.43	1.0
n-Propylbenzene	ND	ND	ND	ND	0.28	1.0
Bromobenzene	ND	ND	ND	ND	0.23	0.5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	0.34	1.0
2-Chlorotoluene	ND	ND	ND	ND	0.31	1.0
4-Chlorotoluene	ND	ND	ND	ND	0.28	1.0
tert-Butylbenzene	ND	ND	ND	ND	0.63	1.0
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.30	1.0
sec-Butylbenzene	ND	ND	ND	ND	0.31	1.0
4-Isopropyltoluene	ND	ND	ND	ND	0.38	1.0
1,3-Dichlorobenzene	ND	ND	ND	ND	0.21	1.0
1,4-Dichlorobenzene	ND	ND	ND	ND	0.44	1.0
n-Butylbenzene	ND	ND	ND	ND	0.37	1.0
1,2-Dichlorobenzene	ND	ND	ND	ND	0.17	0.5
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	0.95	1.0
1,2,4-Trichlorobenzene	ND	ND	ND	ND	0.45	1.0
Hexachloro-1,3-butadiene	ND	ND	ND	ND	0.38	1.0
Napthalene	ND	ND	ND	ND	0.56	1.0
1,2,3-Trichlorobenzene	ND	ND	ND	ND	0.36	0.5
System Monitoring Compounds	**Surrogate % Recovery**				**APR (%)**	
Dibromofluoromethane	109	106	125	120	80-120	
Toluene-d8	90	97	97	95	80-120	
4-Bromofluorobenzene	70	74	90	91	80-120	

Key: ND = Not Detected **MDL** = Method Detection Limit **PQL** = Practical Quantitation Limit **J** = Trace Conc. Between MDL and PQ

Southland Technical Services, Inc.

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LABORATORY ANALYSIS

Client Name : BAS/Gregory Canyon
Sample Type : Grab
Matrix : Water
Unit : μg/L

Date Sampled : 12/11/01
Date Received :12/12/01
Date Analyzed : 12/19/01
Date Reported : 01/02/02

SEMI-VOLATILE ORGANICS BY EPA 8270C (GC/MS)

Client ID	Method Blank	GLA-5			MDL	PQL
STS ID	121901Blk	EB1260-01				
Dilution Factor	1	1				
N-Nitrosodimethylamine	ND	ND			1.7	5
Phenol	ND	ND			0.39	10
bis(2-Chloroethyl)ether	ND	ND			0.45	5
2-Chlorophenol	ND	ND			0.32	10
1,3-Dichlorobenzene	ND	ND			0.88	5
1,4-Dichlorobenzene	ND	ND			1.0	5
Benzyl alcohol	ND	ND			1.4	10
1,2-Dichlorobenzene	ND	ND			0.95	5
2-Methylphenol	ND	ND			0.97	10
bis(2-Chloroisopropyl)ether	ND	ND			1.5	5
4-Methylphenol	ND	ND			1.5	10
N-Nitroso-di-n-propylamine	ND	ND			0.74	10
Hexachloroethane	ND	ND			0.93	10
Nitrobenzene	ND	ND			1.2	10
Isophorone	ND	ND			0.78	5
2-Nitrophenol	ND	ND			0.95	10
2,4-Dimethylphenol	ND	ND			0.63	10
bis(2-Chloroethoxy)methane	ND	ND			0.82	10
2,4-Dichlorophenol	ND	ND			0.93	10
1,2,4-Trichlorobenzene	ND	ND			0.84	5
Naphthalene	ND	ND			0.83	10
4-Chloroaniline	ND	ND			2.0	10
2,6-Dichlorophenol	ND	ND			0.93	10
Hexachlorobutadiene	ND	ND			0.96	5
4-Chloro-3-methylphenol	ND	ND			1.2	10
2-Methylnaphthalene	ND	ND			1.1	5
Hexachlorocyclopentadiene	ND	ND			2.5	5
2,4,6-Trichlorophenol	ND	ND			0.49	10
2,4,5-Trichlorophenol	ND	ND			1.1	10

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Client Name : BAS/Gregory Canyon **Date Sampled : 12/11/01**

SEMI-VOLATILE ORGANICS BY EPA 8270C (GC/MS)

Client ID	Method Blank	GLA-5			MDL	PQL
2-Chloronaphthalene	ND	ND			0.71	5
2-Nitroaniline	ND	ND			1.9	10
Dimethylphthalate	ND	ND			0.57	5
2,6-Dinitrotoluene	ND	ND			0.44	10
Acenaphthylene	ND	ND			0.65	5
3-Nitroaniline	ND	ND			0.29	10
Acenaphthene	ND	ND			0.55	5
2,4-Dinitrophenol	ND	ND			3.1	10
4-Nitrophenol	ND	ND			1.7	10
Dibenzofuran	ND	ND			0.64	10
2,4-Dinitrotoulene	ND	ND			0.55	10
Diethylphthalate	ND	ND			0.63	5
Fluorene	ND	ND			0.32	5
4,6-Dinitro-2-methylphenol	ND	ND			2.8	10
4-Chlorophenyl phenyl ether	ND	ND			0.69	10
4-Nitroaniline	ND	ND			1.6	10
alpha-BHC	ND	ND			0.45	10
n-Nitrosodiphenylamine	ND	ND			0.76	10
4-Bromophenyl phenyl ether	ND	ND			0.42	10
Hexachlorobenzene	ND	ND			0.61	10
Heptachlor	ND	ND			0.23	10
beta-BHC	ND	ND			0.28	10
Pentachlorophenol	ND	ND			2.2	10
Phenanthrene	ND	ND			0.61	10
Anthracene	ND	ND			0.64	5
delta-BHC	ND	ND			0.31	5
Aldrin	ND	ND			0.52	5
Di-n-butylphthalate	ND	ND			0.90	5
Heptachloepoxide	ND	ND			0.33	5
Fluoranthene	ND	ND			0.47	5
Endosulfan I	ND	ND			0.30	5
Pyrene	ND	ND			0.61	5
4, 4'-DDE	ND	ND			0.35	5
Diendrin	ND	ND			0.44	5

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Client Name : BAS/Gregory Canyon **Date Sampled : 12/11/01**

Semi-Volatile Organics Analysis (continued)

Client ID	Method Blank	GLA-5			MDL	PQL
Endrin	ND	ND			0.44	5
Endosulfan II	ND	ND			1.2	10
4, 4'-DDD	ND	ND			0.27	5
Endosulfan sulfate	ND	ND			0.23	10
Endrin aldehyde	ND	ND			1.3	10
4, 4'-DDT	ND	ND			0.30	5
Butyl benzylphthalate	ND	ND			0.62	5
p, p'-Methoxychlor	ND	ND			0.26	10
3,3'-Dichlorobenzidine	ND	ND			1.7	10
bis(2-Ethylhexyl)phthalate	ND	ND			0.83	10
Benzo[a]anthracene	ND	ND			0.53	5
Chrysene	ND	ND			0.47	5
Di-n-octylphthalate	ND	ND			0.59	5
Benzo[b]fluoranthene	ND	ND			2.7	10
Benzo[k]fluorathene	ND	ND			0.75	10
Benzo[a]pyrene	ND	ND			0.56	10
Indeno[1,2,3-cd]pyrene	ND	ND			0.71	5
Benzo[g,h,i]perylene	ND	ND			0.77	5
Diben[a,h]anthracene	ND	ND			1.6	10
Benzyl Chloride	ND	ND			5	20
System Monitoring Compounds	**Surrogate % Recovery**				**Accept. % Rec.**	
2-Fluorophenol	73	85			21-100	
Phenol-d6	74	89			10-94	
Nitrobenzene-D5	88	20			35-114	
2-Fluorobiphenyl	92	76			43-116	
2,4,6-Tribromophenol	86	90			10-123	
p-Terphenyl-d14	43	38			33-141	

Key: ND = Not Detected **MDL** = Method Detection Limit **PQL** = Pratical Quantitation Limit **J** = Trace Conc. Between MDL and PQL
M.B. = Method Blank

Southland Technical Services, Inc.

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LABORATORY ANALYSIS

Client Name : BAS / Gregory Canyon
Type : Grab
Matrix : Water
Unit : µg/L

Date Sampled : 12/12/01
Date Received:12/12/01
Date Analyzed : 12/19/01
Date Reported :01/02/02

EPA 8270C LCS Recovery

Compound	Sample	Spike	Spike	Dup	Spike	Dup	RPD	QC Limit	
	Conc µg/L	Added µg/L	Res µg/L	Res µg/L	% Rec	% Rec	%	RPD	% Rec
Phenol	ND	100	73.6	79.3	74	79	7	40	12-130
2-Chlorophenol	ND	100	80.1	83.1	80	83	4	40	24-134
1,4-Dichlorobenzene	ND	50	37	41	74	82	10	40	36-124
N-Nitroso-di-n-propylamine	ND	50	36.3	22	73	44	49	40	41-230
1,2,4-Trichlorobenzene	ND	50	35	39	70	78	11	40	44-142
4-Chloro-3-methylphenol	ND	100	57.3	67.7	57	68	17	40	22-147
Acenaphthene	ND	50	38	42	75	84	11	40	47-145
4-Nitrophenol	ND	100	61	70	61	70	14	40	12-132
2,4-Dinitrotoluene	ND	50	25	36	51	73	36	40	39-139
Pentachlorophenol	ND	100	66	95	66	95	36	40	14-176
Pyrene	ND	50	29	30	58	61	4	40	26-130

Southland Technical Services, Inc.

Ellis Hsue
Laboratory Manager

Roger Wang, Ph.D.
Laboratory Director

Calscience
Environmental
Laboratories, Inc.

REC'D AUG 2 0 1999

August 16, 1999

Sarah Battelle
GeoLogic Associates
16885 W. Bernardo Dr., Suite 305
San Diego, CA 92127

Subject: **Calscience Work Order No.: 99-08-0277**
Client Reference: Gregory Canyon

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 08/09/99 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Jody McInerney
Project Manager

William H. Christensen
Quality Assurance Manager

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0277

Method: Inorganic Constituents
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	pH (pH units)	Total Dissolved Solids (mg/L)	Chloride (mg/L)	DF	Nitrate-N (mg/L)	DF	Sulfate (mg/L)	DF
GLA-2	7.10	888	164	100	26.2	100	136	100
River-Up	7.08	585	86	10	0.098 J	1	84	10
GLA-10	6.70	608	120	100	7.1	10	63	10
GLA-7	6.53	578	120	100	0.6	1	76	10
River Down	7.40	622	96	10	0.3	1	171	100
Method Blank	NA	NA	ND	1	ND	1	ND	1
EPA Method:	150.1	160.1	300.0		300.0		300.0	
Date Analyzed:	08/10/99	08/10/99	08/10/99		08/10/99		08/10/99	
RL/MDL:	0.01/NA	1/NA	1/0.107		0.1/0.0077		1/0.056	

Quality Assurance and Control Information

Matrix Spike/Matrix Spike Duplicate

Sample ID: GLA-2

Analyte	Spike Conc. (mg/L)	MS Rec. (%)	MSD Rec. (%)	MS/MSD Control Limits	RPD (%)	RPD Control Limits
Chloride	400	95	94	50-150	0	0-25
Nitrate-N	200	94	94	50-150	0	0-25
Sulfate	400	95	94	50-150	0	0-25

Laboratory Notes

Key: ND=Not Detected at the reporting level, NA=Not applicable, DF=Dilution Factor, RL=Reporting Limit, MDL=Method Detection Limit, J=Analyte was detected at a concentration below the reporting limit. Reported value is estimated.

Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0277

Method: EPA 8260B
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	GLA-2 (µg/L)	River-Up (µg/L)	GLA-10 (µg/L)	GLA-7 (µg/L)	River Down (µg/L)	Trip Blank (µg/L)	Equip Blank (µg/L)	Method Blank (µg/L)	RL	MDL
Acetone	4.3 J	4.8 J	ND	ND	ND	ND	4.2 J	ND	10	3.0
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	0.50	0.25
Bromobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.18
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.27
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.092
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.23
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.78
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	10	3.5
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.32
s-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.32
t-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.16
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND	10	0.54
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	0.50	0.11
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.20
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.50
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.16
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.43
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.26
4-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.22
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.24
1,2-Dibromo-3-Chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	5.0	2.8
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.15
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.22
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.22
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.33
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.36
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.34
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.27
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.50	0.37
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.25
c-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.43
t-1,2 Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.33
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.36
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.17
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.38
Dilution Factor:	1	1	1	1	1	1	1			
QC Batch ID:	990810AW	990810AW	990810AW	990810AW	990810AW	990810AW	990810AW	990810AW		
Date Analyzed	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99		

Laboratory Notes

Key: ND=Not Detected at the reporting level, J=Analyte was detected at a concentration below the reporting limit. Reported value is estimated.

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Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0277

Method: EPA 8260B
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	GLA-2 (µg/L)	River-Up (µg/L)	GLA-10 (µg/L)	GLA-7 (µg/L)	River Down (µg/L)	Trip Blank (µg/L)	Equip Blank (µg/L)	Method Blank (µg/L)	RL	MDL
1,1-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.24
c-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	0.50	0.20
t-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	0.50	0.17
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.17
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	10	3.0
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.16
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.44
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	3.4 J	10	2.9
4-Methyl-2-Pentanone	ND	ND	ND	ND	ND	ND	ND	ND	10	2.9
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	10	0.57
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.25
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.23
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.13
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.29
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.37
Toluene	0.52 J	ND	ND	ND	ND	ND	ND	ND	1.0	0.11
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.47
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.37
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.18
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.22
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.24
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	10	0.35
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.33
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.21
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.24
Vinyl Acetate	ND	ND	ND	ND	ND	ND	ND	ND	10	1.8
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.50	0.26
p/m-Xylene	0.69 J	ND	ND	ND	ND	ND	ND	ND	1.0	0.30
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	1.0	0.14
Methyl tert-Butyl Ether	ND	ND	ND	ND	ND	ND	0.6 J	ND	1.0	0.20
Dilution Factor:	1	1	1	1	1	1	1			
QC Batch ID:	990810AW	990810AW	990810AW	990810AW	990810AW	990810AW	990810AW	990810AW		
Date Analyzed	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99		
Surrogate Recoveries:										
Dibromofluoromethane	104	104	103	104	107	102	104	105		
1,4-Bromofluorobenzene	101	100	100	100	99	100	100	99		
Toluene-d8	101	100	101	101	101	101	101	101		

Laboratory Notes

Surrogate Recovery Control Limits:

Dibromofluoromethane	86-118
1,4-Bromofluorobenzene	86-115
Toluene-d8	88-110

Key: ND=Not Detected at the reporting level, J=Analyte was detected at a concentration below the reporting limit. Reported value is estimated.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoLogic Associates
16885 W. Bernardo Dr., Suite 305
San Diego, CA 92127

Project: Gregory Canyon

Date Received: 08/09/99
Work Order No: 99-08-0277
Preparation: N/A
Method: EPA 8260B

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GLA-2	Aqueous	GC/MS L	N/A	08/10/99	99080277-1

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	106	72-127	2	0-25	
Carbon Tetrachloride	110	109	70-130	1	0-25	
Chlorobenzene	106	107	72-131	1	0-25	
1,2-Dichlorobenzene	107	106	70-130	1	0-25	
1,1-Dichloroethene	102	102	69-127	1	0-25	
Toluene	109	109	75-124	0	0-25	
Trichloroethene	109	108	60-137	1	0-25	
Vinyl Chloride	103	100	70-130	3	0-25	
Methyl-tert-Butyl Ether	119	118	80-120	1	0-25	

CALSCIENCE ENVIRONMENTAL
LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date 8-9-99

Page 1 of 1

LABORATORY CLIENT: Geologic Associates
ADDRESS: 16885 W. Bernardo Drive
CITY: San Diego STATE: CA ZIP:
TEL: 619 451-1136 FAX: 619 451-1 E-MAIL: WLOPEZ@geologic.com

CLIENT PROJECT NAME / NUMBER: Gregory Canyon
PROJECT CONTACT: Sara Battelle
SAMPLER(S): (SIGNATURE)

P.O. NO.:
QUOTE NO.:
LAB USE ONLY: 0 8 - 0 2 7 7

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___.

SPECIAL INSTRUCTIONS

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) (O)	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EDB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	ICP/MS METALS (6020)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	pH, TDS, NO_3, SO_4, Cl
	GLA-2		8-9-99	12:20	GW	4					✓											✓
	River-Up		↓	14:00	↓	4					✓											✓
	GLA-10			14:30		3					✓											✓
	GLA-7			16:15		4					✓											✓
	River Down		✓	16:45	↓	4					✓											✓
	Trip Blank		—	—		1					✓											
	Equip Blank		—	—	↓	1					✓											

Relinquished by: (Signature)	Received by: (Signature)	Date: 8-9-99	Time: 17:20
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date: 08-09-99	Time: 1910

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

02/01/99 Revision

Q&Q Graphic (714) 898-9702

Calscience
Environmental
Laboratories, Inc.

REC'D AUG 2 0 1999

August 17, 1999

Sarah Battelle
GeoLogic Associates
16885 W. Bernardo Dr., Suite 305
San Diego, CA 92127

Subject: **Calscience Work Order No.: 99-08-0304**
Client Reference: Gregory Canyon

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 08/10/99 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Jody McInerney
Project Manager

William H. Christensen
Quality Assurance Manager

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0304

Method: Inorganic Constituents
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	pH (pH units)	Total Dissolved Solids (mg/L)	Chloride (mg/L)	DF	Nitrate-N (mg/L)	DF	Sulfate (mg/L)	DF
Res. Well #2	6.98	506	74	10	0.3	1	115	100
Res. Well #3	7.01	558	78	10	0.077 J	1	150	100
Res. Well #4	6.80	671	91	10	0.7	1	168	100
GLA 4	6.42	444	46	10	1.0	1	30	10
Method Blank	NA	NA	ND	1	ND	1	ND	1
EPA Method:	150.1	160.1	300.0		300.0		300.0	
Date Analyzed:	08/10/99	08/10/99	08/10/99		08/10/99		08/10/99	
RL/MDL:	0.01/NA	1/NA	1/0.107		0.1/0.0077		1/0.056	

Quality Assurance and Control Information

Matrix Spike/Matrix Spike Duplicate

Sample ID: 99-08-0277-1

Analyte	Spike Conc. (mg/L)	MS Rec. (%)	MSD Rec. (%)	MS/MSD Control Limits	RPD (%)	RPD Control Limits
Chloride	400	95	94	50-150	0	0-25
Nitrate-N	200	94	94	50-150	0	0-25
Sulfate	400	95	94	50-150	0	0-25

Laboratory Notes

Key: ND=Not Detected at the reporting level, NA=Not applicable, DF=Dilution Factor, RL=Reporting Limit, MDL=Method Detection Limit, J=Analyte was detected at a concentration below the reporting limit. Reported value is estimated.

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Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0304

Method: EPA 8260B
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	Res. Well #2 (µg/L)	Res. Well #3 (µg/L)	Res. Well #4 (µg/L)	GLA 4 (µg/L)	Field Blank (µg/L)	Method Blank (µg/L)	RL	MDL
Acetone	ND	ND	4.9 J	ND	ND	ND	10	3.0
Benzene	ND	ND	ND	ND	ND	ND	0.50	0.25
Bromobenzene	ND	ND	ND	ND	ND	ND	1.0	0.18
Bromochloromethane	ND	ND	ND	ND	ND	ND	1.0	0.27
Bromodichloromethane	ND	ND	ND	ND	ND	ND	1.0	0.092
Bromoform	ND	ND	ND	ND	ND	ND	1.0	0.23
Bromomethane	ND	ND	ND	ND	ND	ND	1.0	0.78
2-Butanone	ND	ND	ND	ND	ND	ND	10	3.5
n-Butylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.32
s-Butylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.32
t-Butylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.16
Carbon Disulfide	ND	ND	ND	ND	ND	ND	10	0.54
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	0.50	0.11
Chlorobenzene	ND	ND	ND	ND	ND	ND	1.0	0.20
Chloroethane	ND	ND	ND	ND	ND	ND	1.0	0.50
Chloroform	ND	ND	1.2	ND	ND	ND	1.0	0.16
Chloromethane	ND	ND	ND	ND	ND	ND	1.0	0.43
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	1.0	0.26
4-Chlorotoluene	ND	ND	ND	ND	ND	ND	1.0	0.22
Dibromochloromethane	ND	ND	ND	ND	ND	ND	1.0	0.24
1,2-Dibromo-3-Chloropropane	ND	ND	ND	ND	ND	ND	5.0	2.8
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	1.0	0.15
Dibromomethane	ND	ND	ND	ND	ND	ND	1.0	0.22
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	1.0	0.22
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	1.0	0.33
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	1.0	0.36
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	1.0	0.34
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	1.0	0.27
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	0.50	0.37
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	1.0	0.25
c-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	1.0	0.43
t-1,2 Dichloroethene	ND	ND	ND	ND	ND	ND	1.0	0.33
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	1.0	0.36
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	1.0	0.17
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	1.0	0.38
Dilution Factor:	1	1	1	1	1	1		
QC Batch ID:	990811AW	990811AW	990811AW	990811AW	990811AW	990811AW		
Date Analyzed	08/11/99	08/11/99	08/11/99	08/11/99	08/11/99	08/11/99		

Laboratory Notes

Key: ND=Not Detected at the reporting level, J=Analyte was detected at a concentration below the reporting limit. Reported value is estimated.

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Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0304

Method: EPA 8260B
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	Res. Well #2 (µg/L)	Res. Well #3 (µg/L)	Res. Well #4 (µg/L)	GLA 4 (µg/L)	Field Blank (µg/L)	Method Blank (µg/L)	RL	MDL
1,1-Dichloropropene	ND	ND	ND	ND	ND	ND	1.0	0.24
c-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	0.50	0.20
t-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	0.50	0.17
Ethylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.17
2-Hexanone	ND	ND	ND	ND	ND	ND	10	3.0
Isopropylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.16
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	1.0	0.44
Methylene Chloride	ND	ND	ND	ND	ND	ND	10	2.9
4-Methyl-2-Pentanone	ND	ND	ND	ND	ND	ND	10	2.9
Naphthalene	ND	ND	ND	ND	ND	ND	10	0.57
n-Propylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.25
Styrene	ND	ND	ND	ND	ND	ND	1.0	0.23
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	1.0	0.13
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	1.0	0.29
Tetrachloroethene	ND	ND	ND	ND	ND	ND	1.0	0.37
Toluene	ND	ND	ND	ND	ND	ND	1.0	0.11
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	1.0	0.47
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	1.0	0.37
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	1.0	0.18
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	1.0	0.22
Trichloroethene	ND	ND	ND	ND	ND	ND	1.0	0.24
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	10	0.35
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	1.0	0.33
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.21
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	1.0	0.24
Vinyl Acetate	ND	ND	ND	ND	ND	ND	10	1.8
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.50	0.26
p/m-Xylene	ND	ND	ND	ND	ND	ND	1.0	0.30
o-Xylene	ND	ND	ND	ND	ND	ND	1.0	0.14
Methyl tert-Butyl Ether	ND	ND	ND	ND	ND	ND	1.0	0.20
Dilution Factor:	1	1	1	1	1	1		
QC Batch ID:	990811AW	990811AW	990811AW	990811AW	990811AW	990811AW		
Date Analyzed	08/11/99	08/11/99	08/11/99	08/11/99	08/11/99	08/11/99		
Surrogate Recoveries:								
Dibromofluoromethane	97	97	98	98	97	99		
1,4-Bromofluorobenzene	99	97	96	100	99	97		
Toluene-d8	96	97	96	95	96	98		

Laboratory Notes

Surrogate Recovery Control Limits:

Dibromofluoromethane	86-118
1,4-Bromofluorobenzene	86-115
Toluene-d8	88-110

Key: ND=Not Detected at the reporting level, J=Analyte was detected at a concentration below the reporting limit. Reported value is estimated.

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoLogic Associates
16885 W. Bernardo Dr., Suite 305
San Diego, CA 92127

Project: Gregory Canyon

Date Received: 08/10/99
Work Order No: 99-08-0304
Preparation: N/A
Method: EPA 8260B

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Res. Well #2	**Aqueous**	**GC/MS A**	**N/A**	**08/12/99**	**990803041**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	99	72-127	1	0-25	
Carbon Tetrachloride	103	107	70-130	4	0-25	
Chlorobenzene	100	103	72-131	3	0-25	
1,2-Dichlorobenzene	101	102	70-130	1	0-25	
1,1-Dichloroethene	93	97	69-127	4	0-25	
Toluene	100	97	75-124	3	0-25	
Trichloroethene	100	102	60-137	2	0-25	
Vinyl Chloride	82	94	70-130	14	0-25	
Methyl-tert-Butyl Ether	108	102	80-120	5	0-25	

CALSCIENCE ENVIRONMENTAL LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date 8-10-99

Page 1 of 1

LABORATORY CLIENT: Geologic Associates

ADDRESS: 16885 W. Bernardo Drive

CITY: San Diego STATE: CA ZIP:

TEL: 619 451-1136 FAX: — E-MAIL: —

CLIENT PROJECT NAME / NUMBER: Gregory Canyon

PROJECT CONTACT: Sarah Battelle

SAMPLER(S): (SIGNATURE)

P.O. NO.:

QUOTE NO.:

LAB USE ONLY: 0 8 - 5 3 0 4

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___.

SPECIAL INSTRUCTIONS

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) (O)	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EDB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	ICP/MS METALS (6020)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	pH, TDS, NO_3, SO_4, Cl			
	Res. Well #2		8-10-99	11:30	GW	4					/											/			
	Res. Well #3		↓	11:50	↓	4					/											/			
	Res. Well #4		↓	12:15	↓	4					/											/			
	GLA 4		↓	14:15	↓	4					/											/			
	Field Blank		↓		↓	1					/														

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		8-10-99	14:46
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date: 8-10-99	Time: 1700

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

02/01/99 Revision

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Calscience Environmental Laboratories, Inc.

REC'D AUG 2 0 1999

August 18, 1999

Sarah Battelle
GeoLogic Associates
16885 W. Bernardo Dr., Suite 305
San Diego, CA 92127

Subject: **Calscience Work Order No.: 99-08-0317**
Client Reference: Gregory Canyon

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 08/11/99 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Jody McInerney
Project Manager

William H. Christensen
Quality Assurance Manager

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0317

Method: Inorganic Constituents
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	pH (pH units)	Total Dissolved Solids (mg/L)	Chloride (mg/L)	DF	Nitrate-N (mg/L)	DF	Sulfate (mg/L)	DF
GLA 5	6.66	992	157	100	16.6	10	309	100
Method Blank	NA	NA	ND	1	ND	1	ND	1
EPA Method:	150.1	160.1	300.0		300.0		300.0	
Date Analyzed:	08/11/99	08/12/99	08/11/99		08/11/99		08/11/99	
RL/MDL:	0.01/NA	1/NA	1/0.107		0.1/0.0077		1/0.056	

Quality Assurance and Control Information

Matrix Spike/Matrix Spike Duplicate

Sample ID: GLA 5

Analyte	Spike Conc. (mg/L)	MS Rec. (%)	MSD Rec. (%)	MS/MSD Control Limits	RPD (%)	RPD Control Limits
Chloride	400	92	91	50-150	0	0-25
Nitrate-N	200	95	95	50-150	0	0-25
Sulfate	400	96	96	50-150	0	0-25

Laboratory Notes

Key: ND=Not Detected at the reporting level, NA=Not applicable, DF=Dilution Factor, RL=Reporting Limit, MDL=Method Detection Limit

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0317

Method: EPA 8260B
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	GLA 5 (µg/L)	Equip. Blank (µg/L)	Method Blank (µg/L)	RL	MDL
Acetone	ND	ND	ND	10	3.0
Benzene	ND	ND	ND	0.50	0.25
Bromobenzene	ND	ND	ND	1.0	0.18
Bromochloromethane	ND	ND	ND	1.0	0.27
Bromodichloromethane	ND	ND	ND	1.0	0.092
Bromoform	ND	ND	ND	1.0	0.23
Bromomethane	ND	ND	ND	1.0	0.78
2-Butanone	ND	ND	ND	10	3.5
n-Butylbenzene	ND	ND	ND	1.0	0.32
s-Butylbenzene	ND	ND	ND	1.0	0.32
t-Butylbenzene	ND	ND	ND	1.0	0.16
Carbon Disulfide	ND	ND	ND	10	0.54
Carbon Tetrachloride	ND	ND	ND	0.50	0.11
Chlorobenzene	ND	ND	ND	1.0	0.20
Chloroethane	ND	ND	ND	1.0	0.50
Chloroform	ND	ND	ND	1.0	0.16
Chloromethane	ND	ND	ND	1.0	0.43
2-Chlorotoluene	ND	ND	ND	1.0	0.26
4-Chlorotoluene	ND	ND	ND	1.0	0.22
Dibromochloromethane	ND	ND	ND	1.0	0.24
1,2-Dibromo-3-Chloropropane	ND	ND	ND	5.0	2.8
1,2-Dibromoethane	ND	ND	ND	1.0	0.15
Dibromomethane	ND	ND	ND	1.0	0.22
1,2-Dichlorobenzene	ND	ND	ND	1.0	0.22
1,3-Dichlorobenzene	ND	ND	ND	1.0	0.33
1,4-Dichlorobenzene	ND	ND	ND	1.0	0.36
Dichlorodifluoromethane	ND	ND	ND	1.0	0.34
1,1-Dichloroethane	ND	ND	ND	1.0	0.27
1,2-Dichloroethane	ND	ND	ND	0.50	0.37
1,1-Dichloroethene	ND	ND	ND	1.0	0.25
c-1,2-Dichloroethene	ND	ND	ND	1.0	0.43
t-1,2 Dichloroethene	ND	ND	ND	1.0	0.33
1,2-Dichloropropane	ND	ND	ND	1.0	0.36
1,3-Dichloropropane	ND	ND	ND	1.0	0.17
2,2-Dichloropropane	ND	ND	ND	1.0	0.38
Dilution Factor:	1	1	1		
QC Batch ID:	990811AW	990811AW	990811AW		
Date Analyzed	08/11/99	08/11/99	08/11/99		

Laboratory Notes

Key: ND=Not Detected at the reporting level

Calscience Environmental Laboratories, Inc.

Analytical Report

LABORATORY ID: 99-08-0317

Method: EPA 8260B
Matrix: Aqueous

CLIENT: GeoLogic Associates
PROJECT: Gregory Canyon

Results

Sample ID	GLA 5 (µg/L)	Equip. Blank (µg/L)	Method Blank (µg/L)	RL	MDL
1,1-Dichloropropene	ND	ND	ND	1.0	0.24
c-1,3-Dichloropropene	ND	ND	ND	0.50	0.20
t-1,3-Dichloropropene	ND	ND	ND	0.50	0.17
Ethylbenzene	ND	ND	ND	1.0	0.17
2-Hexanone	ND	ND	ND	10	3.0
Isopropylbenzene	ND	ND	ND	1.0	0.16
p-Isopropyltoluene	ND	ND	ND	1.0	0.44
Methylene Chloride	ND	ND	ND	10	2.9
4-Methyl-2-Pentanone	ND	ND	ND	10	2.9
Naphthalene	ND	ND	ND	10	0.57
n-Propylbenzene	ND	ND	ND	1.0	0.25
Styrene	ND	ND	ND	1.0	0.23
1,1,1,2-Tetrachloroethane	ND	ND	ND	1.0	0.13
1,1,2,2-Tetrachloroethane	ND	ND	ND	1.0	0.29
Tetrachloroethene	ND	ND	ND	1.0	0.37
Toluene	ND	ND	ND	1.0	0.11
1,2,3-Trichlorobenzene	ND	ND	ND	1.0	0.47
1,2,4-Trichlorobenzene	ND	ND	ND	1.0	0.37
1,1,1-Trichloroethane	ND	ND	ND	1.0	0.18
1,1,2-Trichloroethane	ND	ND	ND	1.0	0.22
Trichloroethene	ND	ND	ND	1.0	0.24
Trichlorofluoromethane	ND	ND	ND	10	0.35
1,2,3-Trichloropropane	ND	ND	ND	1.0	0.33
1,2,4-Trimethylbenzene	ND	ND	ND	1.0	0.21
1,3,5-Trimethylbenzene	ND	ND	ND	1.0	0.24
Vinyl Acetate	ND	ND	ND	10	1.8
Vinyl Chloride	ND	ND	ND	0.50	0.26
p/m-Xylene	ND	ND	ND	1.0	0.30
o-Xylene	ND	ND	ND	1.0	0.14
Methyl tert-Butyl Ether	ND	ND	ND	1.0	0.20
Dilution Factor:	1	1	1		
QC Batch ID:	990811AW	990811AW	990811AW		
Date Analyzed	08/11/99	08/11/99	08/11/99		
Surrogate Recoveries:					
Dibromofluoromethane	100	98	99		
1,4-Bromofluorobenzene	96	97	98		
Toluene-d8	101	98	97		

Laboratory Notes

Surrogate Recovery Control Limits:

Dibromofluoromethane	86-118
1,4-Bromofluorobenzene	86-115
Toluene-d8	88-110

Key: ND=Not Detected at the reporting level, J=Analyte was detected at a concentration below the reporting limit.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoLogic Associates
16885 W. Bernardo Dr., Suite 305
San Diego, CA 92127

Project: Gregory Canyon

Date Received: 08/11/99
Work Order No: 99-08-0317
Preparation: N/A
Method: EPA 8260B

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
99-08-0304-1	**Aqueous**	**GC/MS A**	**N/A**	**08/12/99**	**990803041**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	99	72-127	1	0-25	
Carbon Tetrachloride	103	107	70-130	4	0-25	
Chlorobenzene	100	103	72-131	3	0-25	
1,2-Dichlorobenzene	101	102	70-130	1	0-25	
1,1-Dichloroethene	93	97	69-127	4	0-25	
Toluene	100	97	75-124	3	0-25	
Trichloroethene	100	102	60-137	2	0-25	
Vinyl Chloride	82	94	70-130	14	0-25	
Methyl-tert-Butyl Ether	108	102	80-120	5	0-25	

CALSCIENCE ENVIRONMENTAL LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date 8-10-99

Page 1 of 1

LABORATORY CLIENT: Geologic Associates

ADDRESS: 16885 W. Bernardo Drive

CITY: San Diego STATE: CA ZIP: 92127

TEL: 619 451 1136 FAX: 619 451 1087 E-MAIL:

CLIENT PROJECT NAME / NUMBER: Gregory Canyon

PROJECT CONTACT: Sarah Bartlett

SAMPLER(S): (SIGNATURE)

P.O. NO.: 9539

QUOTE NO.:

LAB USE ONLY: 0 8 - 0 3 1 7

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___.

SPECIAL INSTRUCTIONS

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) (O)	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EDB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	ICP/MS METALS (6020)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	pH, TDS, NO_3, SO_4, Cl			
1	SLA-5		8-10-99	14:50	GW	4					✓											✓			
2	Equip Blank		8-10-99	14:35	↓	1					✓														

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date: 8/11/99	Time: 1000

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02/01/99 Revision

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