Air Quality Technical Analysis

for the

Freedom Ranch Project

CASE NUMBER: 3301 74-011-07
ENVIRONMENTAL LOG NO.: 12-21-002

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Glossary of Terms and Acronyms

APCD	Air Pollution Control District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
DPLU	San Diego County Department of Planning and Land Use
EPA	United States Environmental Protection Agency
RAQS	San Diego County Regional Air Quality Strategy
SANDAG	San Diego Association of Governments
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District

Executive Summary

This report presents an assessment of potential air quality impacts associated with the proposed Freedom Ranch Project at 1777 Buckman Springs Road (APN's 607-110-10, 11, 36, 53, and 54; 607-120-69) in the Campo Community Planning Group Area. The proposed Freedom Ranch expansion will increase the facility size to provide services for up to 125 men. This expansion would occur over a period of time. In the first phase a new dormitory would be built expanding the bed capacity to 75. In the second phase, another dormitory would be constructed, and the dining hall would also be constructed. In the third phase, additional dormitories would be built allowing for all hundred beds to be located near the new multipurpose room. The old dormitory/kitchen/dining room facility would be converted to staff quarters and administration. The building, which houses the existing staff quarters, would be removed. In the final phase the two 6-bed residential facilities would be torn down and a 25-bed transitional facility/sober living facility would be constructed.

1.0 INTRODUCTION

1.1 Purpose of the Report

This report presents an assessment of potential air quality impacts associated with the proposed Freedom Ranch Project. As discussed in the County's pre-application summary letter dated October 5, 2010, the County only requested an analysis of the project's conformance with the RAQS; however, the County has subsequently requested an additional analysis to be completed for the project.

1.2 Project Location and Description

The 112.6-acre property is located at 1777 Buckman Springs Road (APN's 607-110-10, 11, 36, 53, and 54; 607-120-69) in the Campo Community Planning Group Area. The site is currently used as a 50-bed residential alcohol and drug treatment and recovery facility. There are also two 6-man independent living residences on the ranch. The facility now wishes to expand in phases to eventually accommodate up to 125 men. Proposed buildings include a multi-purpose building, five dormitories, two parking lots, improved driveways and new septic systems. This proposal requires a Major Use Permit Modification. The last Modification was approved by the Planning Commission on April 2, 1999.

The project will be constructed in four phases:

Phase 1: 25-man dormitory

Phase 2: 25-man dormitory & dining hall

Phase 3: two 25-man dormitories

Phase 4: 25-man dormitory

For conservative purposes, it was assumed that the construction would proceed within a single 18-month time period. This assumption is conservative because it assumes all construction occurs simultaneously, and results in the highest daily emissions.

In order to demonstrate conformance to the RAQS a project can perform a growth projection analysis for the applicable subregional area (SRA) and/or major statistical area (MSA). If the

project, in conjunction with all the other foreseeable projects within the applicable SRA or MSA for a particular year, do not exceed growth projections for dwelling units for that specific SRA or MSA than the proposed project would not be conflicting with the RAQS.

2.0 EXISTING CONDITIONS

2.1 Existing Setting

The project site is located in eastern San Diego County in the Campo Community Planning Group Area. The site is within unincorporated San Diego County, approximately 2 miles north of the town of Campo, near the U.S.-Mexico border. As discussed in Section 1.2, the site is currently used as a 50-bed residential alcohol and drug treatment and recovery facility. There are also two 6-man independent living residences on the ranch. The surrounding area is generally rural and includes some residential uses. Topography is generally rolling hills in the immediate area.

2.2 Climate and Meteorology

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Figure 1 provides a graphic representation of the prevailing winds in the project vicinity, as measured at the San Diego Air Pollution Control District's (SDAPCD's) Chula Vista Monitoring Station (the closest meteorological monitoring station to the site). The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

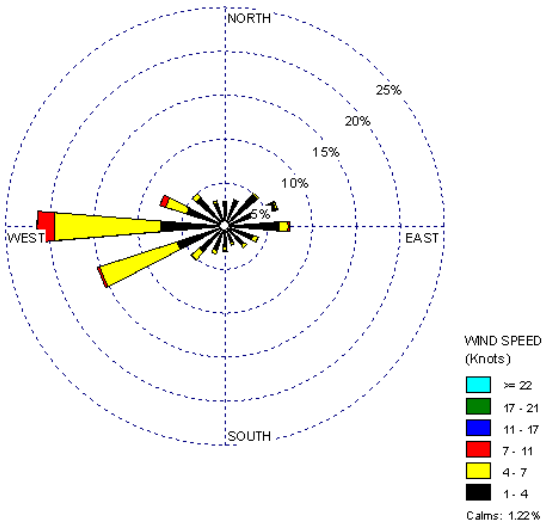

Figure 1. Wind Rose – Chula Vista Monitoring Station

2.3 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established

CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. In September 1997, the EPA promulgated 8-hour ozone (O_3) and 24-hour and annual particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$) national standards. As a result, this action has initiated a new planning process to monitor and evaluate emission control measures for these pollutants. On April 15, 2004, the San Diego Air Basin (SDAB) was designated a basic nonattainment area for the 8-hour NAAQS for O_3. In 2009 the EPA was challenged on its justification for "basic" designations. The EPA subsequently released proposed redesignation classifications for all areas that were classified as "basic" nonattainment. The SDAB has not met the attainment date for a moderate O_3 nonattainment area under the revised classifications; the SDAPCD is in the process of requesting a redesignation to serious nonattainment for the 8-hour NAAQS for O_3. The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is classified as a nonattainment area for the CAAQS for O_3, $PM_{2.5}$, and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}).

The following specific descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on USEPA (2007) and ARB (2001).

Ozone. O_3 is considered a photochemical oxidant, which is a chemical that is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx), both by-products of combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide. CO is a product of combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the

body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in this size range has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Pb in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO_2) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and

enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, and most recently in 2009. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The SDAPCD has also developed the air basin's input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the SDAPCD's plans and control measures for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. The latest SIP update was submitted by the ARB to the USEPA in 2007, which includes the SDAPCD's *Eight-Hour Ozone Attainment Plan for San Diego County* (APCD 2007), which provides plans for attaining and maintaining the 8-hour NAAQS for ozone. The SIP has been approved as of 2012. The SDAPCD also requested to be redesignated from nonattainment to attainment for the 1997 O_3 NAAQS, and prepared an *Ozone Redesignation Request and Maintenance Plan* (SDAPCD 2012).

The RAQS relies on information from ARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by

the cities and by the County as part of the development of the County's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 1
Ambient Air Quality Standards

POLLUTANT	AVE. TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O_3)	1 hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 $\mu g/m^3$)		0.075 ppm (147 $\mu g/m^3$)	0.075 ppm (147 $\mu g/m^3$)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 $\mu g/m^3$)	Gas Phase Chemiluminescence	0.053 ppm (100 $\mu g/m^3$)	0.053 ppm (100 $\mu g/m^3$)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 $\mu g/m^3$)		0.100 ppm (188 $\mu g/m^3$)	--	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 $\mu g/m^3$)	Ultraviolet Fluorescence	--	--	Pararosaniline
	3 hours	--		--	0.5 ppm (1300 $\mu g/m^3$)	
	1 hour	0.25 ppm (655 $\mu g/m^3$)		0.075 ppm (196 $\mu g/m^3$)	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	150 $\mu g/m^3$	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	12 $\mu g/m^3$	12 $\mu g/m^3$	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 $\mu g/m^3$	35 $\mu g/m^3$	
Sulfates	24 hours	25 $\mu g/m^3$	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 $\mu g/m^3$	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 $\mu g/m^3$	1.5 $\mu g/m^3$	
	3-month Rolling Average	--		0.15 $\mu g/m^3$	0.15 $\mu g/m^3$	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 $\mu g/m^3$)	Gas Chromatography	--	--	--

ppm= parts per million
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3= milligrams per cubic meter
Source: California Air Resources Board 2012, www.arb.ca.gov

2.4 Background Air Quality

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the project site is the Alpine monitoring station, which measures ozone, NO_2, and $PM_{2.5}$. Ambient concentrations of pollutants over the last three years are presented in Table 2.

The Alpine monitoring station typically records the highest ozone levels in San Diego County. Some of the levels recorded are attributable to transport from the South Coast Air Basin to the north. The 8-hour federal ozone standard was exceeded 22 times in 2009, 12 times in 2010, and 10 times in 2011. The data from the monitoring station indicates that air quality is in attainment of all other standards. Other pollutants are not considered to be of concern in the region and are not monitored at the Alpine monitoring station.

Table 2
Ambient Background Concentrations
(ppm unless otherwise indicated)

Pollutant	Averaging Time	2009	2010	2011	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.097	0.088	0.093	0.070	Alpine
	1 hour	0.119	0.105	0.114	0.09	Alpine
$PM_{2.5}$	Annual	NA	NA	NA	12 $\mu g/m^3$	Alpine
	24 hour	29.7 $\mu g/m^3$ [2]	23.4 $\mu g/m^3$	25.5 $\mu g/m^3$	35 $\mu g/m^3$	Alpine
NO_2	Annual	0.008	0.007	0.006	0.030	Alpine
	1 hour	0.056	0.052	0.040	0.100	Alpine

NA – not available
Source: www.arb.ca.gov/aqd/aqd.htm

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

The County of San Diego (County of San Diego 2007) has approved guidelines for determining significance based on Appendix G.III of the State CEQA Guidelines. Section 4.0 of the County of San Diego Department of Planning and Land Use *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (County of San Diego 2007) indicates that a project would have a significant environmental impact if:

1. The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
2. The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the screening level thresholds (SLTs) for ozone precursors listed in Table 5 of the Guidelines).
4. The project will expose sensitive receptors to substantial pollutant concentrations.
5. The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The County of San Diego recognizes the SDAPCD's established screening level thresholds for air quality emissions (Rules 20.1 et seq.) as screening-level thresholds for land development projects. As stated above, projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the SDAPCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC

architectural coatings and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the SDAPCD.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by the San Diego SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). The County of San Diego has also adopted the SCAQMD's screening threshold of 55 pounds per day or 10 tons per year as a significance threshold for $PM_{2.5}$.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in the table below.

In the event that emissions exceed these screening-level thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards, including appropriate background levels. For nonattainment pollutants (ozone, with ozone precursors NOx and VOCs, $PM_{2.5}$ and PM_{10}), if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

Table 3 Screening-Level Thresholds for Air Quality Impact Analysis			
Pollutant	Total Emissions		
Construction Emissions			
	Lb. per Day		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NOx)	250		
Oxides of Sulfur (SOx)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million without T-BACT 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). In San Diego County, the County Department of Planning and Land Use identifies an excess cancer risk level of 1 in 1 million or less for projects that do not implement Toxics Best Available Control Technology (T-BACT), and an excess cancer risk level of 10 in 1 million or less for projects that do implement T-BACT. The significance threshold for non-cancer health effects is a health hazard index of one or less. These significance thresholds are consistent with theSDAPCD's Rule 1210 requirements for stationary sources. If a project has the potential to result in emissions of any TAC or HAP which result in a cancer risk of greater than 1 in 1 million without T-BACT, 10 in 1 million with T-BACT, or health hazard index of one or more, the project would be deemed to have a potentially significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, residences, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than the risk significance thresholds discussed above would be deemed to have a potentially significant impact. While AB 3205 uses a distance of 1,000 feet for notification requirements and the South Coast Air Quality Management District recommends evaluating potential impacts within one-quarter mile (SCAQMD 1993), a distance of 1 mile was chosen for conservative purposes because it was considered to be the maximum distance at which localized emissions could affect a sensitive receptor.

Section 6318 of the San Diego County Zoning Ordinance requires all commercial and industrial uses "be operated as not to emit matter causing unpleasant odors which is perceptible by the average person at or beyond any lot line of the lot containing said uses." Section 6318 goes on to further provide specific dilution standards that must be met "at or beyond any lot line of the lot containing the uses." SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

The impacts associated with construction and operation of the project were evaluated for significance based on these significance criteria.

4.0 PROJECT IMPACT ANALYSIS

The proposed Freedom Ranch expansion will increase the facility size to provide services for up to 125 men. This expansion would occur over a period of time. In the first phase a new dormitory would be built expanding the bed capacity to 75. In the second phase, another dormitory would be constructed, and the dining hall would also be constructed. In the third

phase, additional dormitories would be built allowing for all hundred beds to be located near the new multipurpose room. The old dormitory/kitchen/dining room facility would be converted to staff quarters and administration. The building, which houses the existing staff quarters, would be removed. In the final phase the two 6-bed residential facilities would be torn down and a 25-bed transitional facility/sober living facility would be constructed.

4.1 Consistency with Applicable Air Quality Plans

4.1.1 Guidelines for the Determination of Significance

The RAQS outlines the San Diego Air Pollution Control District (APCD)'s plans and control measures designed to attain the State air quality standards for ozone. In addition, the APCD relies on the State Implementation Plan (SIP), which includes the APCD's plans and control measures for attaining the ozone National Ambient Air Quality Standard (NAAQS). These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the Environmental Protection Agency (EPA) and the California Air Resources Board (ARB), and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from ARB and San Diego Association of Governments (SANDAG), including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County of San Diego General Plan and SANDAG's growth projections, the project would

be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the proposed project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

4.1.2 Significance of Impacts Prior to Mitigation

The Freedom Ranch Project is proposing to add a total of 75 beds to its institutional residential project in the unincorporated area of the County. The increase will result in 63 additional beds, as the existing facilities house 62 men, and the expansion will house 125 men. The Project is located in the East County Major Statistical Area, in the Mountain Empire Subregional Area. In 2009, when the additional 90 acres were acquired, the total cumulative housing for the Mountain Empire Subregional Area, according to SANDAG (SANDAG 2012), was 2,860 dwelling units, which included a total of 417 civilian group quarters. The total population in the Subregional Area was 5,991. By the year 2030, the total housing units in the Mountain Empire Subregional Area increases to 3,997, and the projection for civilian group quarters increases to 498 by the year 2030, for an increase of 81 group quarters. The population is projected to increase by 3,021 to 9,012. By the year 2040, the projection for total housing units increases to 4,640, and the projection for the civilian group quarters increases to 564, for a total increase of 147 group quarters, with a population of 10,657. The project's projected increase in group quarters of 63 beds is therefore consistent with the number of units projected by SANDAG. The increase in population due to the project is also consistent with the growth projections, accounting for only 2.09 percent of the total growth projected for the Subregional Area by 2030. Thus the growth projected for the Freedom Ranch Project would not result in a significant impact and the project would be consistent with the RAQS and SIP.

4.1.3 Mitigation Measures and Design Considerations

Because the Project's growth would not exceed the growth projections included by SANDAG in the RAQS and SIP, no mitigation measures are required.

4.1.4 Conclusions

The Freedom Ranch Project would conform with the RAQS and SIP and would not result in a significant impact.

4.2 Conformance to Federal and State Ambient Air Quality Standards

The project will result in a significant impact to air quality if:

The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), construction impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.1.2 Significance of Impacts Prior to Mitigation

For the purpose of this analysis, it was assumed as a conservative scenario that construction would occur within 18 months, starting in July 2012. Due to delays in the project, the construction of the project was delayed. Because emission factors decrease with future years, the emissions would be anticipated to be lower than calculated assuming construction would occur starting in 2012. As discussed in Section 1.2, for conservative purposes, it was assumed that the construction would proceed within a single 18-month time period. This assumption is conservative because it assumes all construction occurs simultaneously, and results in the highest daily emissions. Emissions from grading, building construction, architectural coatings, and demolition of the existing structure were evaluated using the CalEEMod Model.

Table 4 provides a summary of the emission estimates for the project. Refer to Attachment A for detailed CalEEMod Model outputs. As shown in Table 4, the emissions associated with construction are both below the County's screening-level thresholds.

Table 4
Maximum Daily Estimated Construction Emissions

Emission Source	VOCs	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
lbs/day						
2012						
MAXIMUM SIMULTANEOUS EMISSIONS	**6.85**	**52.09**	**32.99**	**0.06**	**5.61**	**4.31**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
2013						
MAXIMUM SIMULTANEOUS EMISSIONS	**28.78**	**111.68**	**77.72**	**0.13**	**8.50**	**6.26**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

4.2.1.3 Design Considerations

The project would utilize fugitive dust control measures as specified in SDAPCD Rule 55, and will use low-VOC paints as specified in SDAPCD Rule 67.0.

4.2.1.4 Conclusions

Project criteria pollutants emissions during construction would not result in a significant impact.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.2.2 Significance of Impacts Prior to Mitigation

Project operational emissions were estimated using the CalEEMod Model. It was assumed that the site would be fully occupied by the year 2013. This assumptions would be conservative because emission factors decrease with time, and would be lower for project operations in subsequent years. Trip generation rates were based on a congregational care facility, assuming 2.74 trips per dwelling unit for a total of 343 average daily trips. The results of the emission calculations, in lbs/day, are summarized in Table 5. The calculations are presented in Appendix A.

Table 5 Total Operational Emissions						
	VOCs	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Summer Emissions, lbs/day						
Area Sources	3.51	0.13	10.76	0.00	0.06	0.06
Energy Use	0.04	0.33	0.14	0.00	0.03	0.03
Vehicle Emissions	2.04	4.44	21.01	0.03	3.42	0.29
TOTAL	**5.50**	**4.00**	**31.91**	**0.03**	**3.51**	**0.38**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Winter Emissions, lbs/day						
Area Sources	3.51	0.13	10.76	0.00	0.06	0.06
Energy Use	0.04	0.33	0.14	0.00	0.03	0.03
Vehicle Emissions	2.21	4.67	20.67	0.03	3.42	0.29
TOTAL	**5.76**	**5.13**	**31.57**	**0.03**	**3.51**	**0.38**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

4.2.2.3 Design Considerations

Emissions associated with the project below the County's screening level thresholds. Because impacts are less than significant, no additional measures are required.

4.2.2.4 Conclusions

Emissions of all criteria pollutants would be less than the screening-level thresholds for project operations and would therefore not result in a significant impact to the ambient air quality. Project traffic would not result in a CO "hot spot" and CO emissions would therefore be less than significant.

4.3 Cumulatively Considerable Net Increase of Criteria Pollutants

The project will result in a significant impact to air quality if:

The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).

4.3.1 Construction Impacts

4.3.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is considered a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructing projects. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NOx, or VOCs during construction would also have a significant cumulatively considerably net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.3.1.2 Significance of Impacts Prior to Mitigation

Emissions of nonattainment pollutants $PM_{2.5}$, NOx, or VOCs would be below the screening-level thresholds for project construction. The emissions budget for 2010 in the SIP, as reported on the ARB's website, includes the following emissions for construction for the SDAB:

- Off-Road Equipment: 15.12 tons/day VOC, 34.11 tons/day NOx
- Construction Fugitive Dust: 27.78 tons/day PM_{10}, 2.78 tons/day $PM_{2.5}$

Emissions of nonattainment pollutants would be consistent with the construction emissions evaluated in the RAQS and SIP for construction projects and would not be cumulatively considerable.

4.3.1.3 Design Considerations

As no cumulatively considerable impact has been identified for the project, no design considerations are required.

4.3.1.4 Conclusions

Impacts would be less than significant.

4.3.2 Operational Impacts

4.3.2.1 Guidelines for the Determination of Significance

As discussed above, based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in NOx, VOCs, PM_{10}, and $PM_{2.5}$. In accordance with the guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase.

4.3.2.2 Significance of Impacts Prior to Mitigation

Emissions of nonattainment pollutants PM_{10}, $PM_{2.5}$, NOx, and VOCs would be below the screening-level thresholds for project operations. The project would therefore not result in a cumulatively considerable net increase in nonattainment pollutants.

4.3.2.3 Design Considerations

As no cumulatively considerable impact has been identified for the project, no Design considerations are required.

4.3.2.4 Conclusions

Because the project's operational emissions are less than the screening-level threshold for nonattainment pollutants, the project would not result in a cumulatively considerable impact.

4.4 Impacts to Sensitive Receptors

4.4.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will expose sensitive receptors to substantial pollutant concentrations.

Air quality regulators typically define "sensitive receptors" as schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purpose of CEQA analysis, the County of San Diego definition of "sensitive receptors" includes residences (County of San Diego 2007). The two primary emissions of concern for impacts to sensitive receptors are CO and diesel particulate matter.

The site is surrounded by some rural single-family residences that are located to the east across Buckman Springs Road. The nearest school is Campo Elementary School, located approximately 1,200 feet to the south of the site.

4.4.2 Significance of Impacts Prior to Mitigation

Because the project would not generate substantial traffic, the project would not result in a CO "hot spot" and no impacts to sensitive receptors from CO would result.

Construction activities would result in temporary emissions of diesel particulate. Diesel particulate matter is known to the state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003a) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted during construction due to the operation of heavy equipment at the site. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts. Given the short-term nature of the construction at the Freedom Ranch site, no significant impacts would result from construction.

4.4.3 Mitigation Measures and Design Considerations

Because impacts to sensitive receptors from CO or diesel particulate emissions would be less than significant, no additional mitigation measures are required.

4.4.4 Conclusions

Impacts to sensitive receptors would be less than significant.

4.5 Odor Impacts

4.5.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

4.5.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Because the construction equipment would be operating at various locations throughout the construction site, and because any operation that would occur in the vicinity of existing receptors would be temporary, impacts associated with odors during construction are therefore not considered significant.

During construction, diesel equipment operating at the site may generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant.

The project is not a source of objectionable odors and would therefore not impact a substantial number of persons or the public.

4.5.3 Mitigation Measures and Design Considerations

Because odor impacts would be less than significant, no additional mitigation measures are required.

4.5.4 Conclusions

Odor impacts would be less than significant.

5.0 REFERENCES

County of San Diego. 2007. Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality. Land Use and Environmental Group, Department of Planning and Land Use, Department of Public Works. March 19.

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6.0 LIST OF PREPARERS, PERSONS AND ORGANIZATIONS CONTACTED

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Freedom Ranch

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Congregate Care (Assisted Living)	125	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Project description

Construction Phase - Assumed construction schedule

Demolition - Assumed size of existing facility

Architectural Coating - SDAPCD Rule 67.0

Woodstoves - No fireplaces assumed

Area Coating - SDAPCD Rule 67.0

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	6.86	52.10	32.94	0.06	6.38	3.01	9.39	3.32	3.01	6.32	0.00	5,388.08	0.00	0.61	0.00	5,401.00
2013	28.86	111.81	77.47	0.13	2.38	6.19	8.57	0.07	6.19	6.26	0.00	13,416.17	0.00	1.39	0.00	13,445.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	6.86	52.10	32.94	0.06	2.61	3.01	5.61	1.30	3.01	4.31	0.00	5,388.08	0.00	0.61	0.00	5,401.00
2013	28.86	111.81	77.47	0.13	2.31	6.19	8.50	0.07	6.19	6.26	0.00	13,416.17	0.00	1.39	0.00	13,445.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Energy	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Mobile	2.21	4.67	20.67	0.03	3.24	0.18	3.42	0.11	0.18	0.29		2,820.20		0.16		2,823.52
Total	**5.76**	**5.13**	**31.57**	**0.03**	**3.24**	**0.18**	**3.51**	**0.11**	**0.18**	**0.38**	**0.00**	**3,263.64**		**0.19**	**0.01**	**3,269.99**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Energy	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Mobile	2.21	4.67	20.67	0.03	3.24	0.18	3.42	0.11	0.18	0.29		2,820.20		0.16		2,823.52
Total	**5.76**	**5.13**	**31.57**	**0.03**	**3.24**	**0.18**	**3.51**	**0.11**	**0.18**	**0.38**	**0.00**	**3,263.64**		**0.19**	**0.01**	**3,269.99**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.19	0.00	6.19	3.31	0.00	3.31						0.00
Off-Road	6.76	51.98	31.88	0.05		3.00	3.00		3.00	3.00		5,240.07		0.60		5,252.76
Total	**6.76**	**51.98**	**31.88**	**0.05**	**6.19**	**3.00**	**9.19**	**3.31**	**3.00**	**6.31**		**5,240.07**		**0.60**		**5,252.76**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.12	1.06	0.00	0.20	0.01	0.20	0.01	0.01	0.01		148.02		0.01		148.23
Total	**0.10**	**0.12**	**1.06**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**148.02**		**0.01**		**148.23**

3.2 Grading - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.41	0.00	2.41	1.29	0.00	1.29						0.00
Off-Road	6.76	51.98	31.88	0.05		3.00	3.00		3.00	3.00	0.00	5,240.07		0.60		5,252.76
Total	**6.76**	**51.98**	**31.88**	**0.05**	**2.41**	**3.00**	**5.41**	**1.29**	**3.00**	**4.29**	**0.00**	**5,240.07**		**0.60**		**5,252.76**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.12	1.06	0.00	0.20	0.01	0.20	0.01	0.01	0.01		148.02		0.01		148.23
Total	**0.10**	**0.12**	**1.06**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**148.02**		**0.01**		**148.23**

3.3 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.63	37.37	23.73	0.04		2.54	2.54		2.54	2.54		4,040.62		0.51		4,051.23
Total	**5.63**	**37.37**	**23.73**	**0.04**		**2.54**	**2.54**		**2.54**	**2.54**		**4,040.62**		**0.51**		**4,051.23**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.22	2.45	1.54	0.00	0.12	0.08	0.20	0.01	0.08	0.09		351.04		0.01		351.26
Worker	0.63	0.72	6.33	0.01	1.17	0.04	1.21	0.04	0.04	0.08		888.11		0.06		889.41
Total	**0.85**	**3.17**	**7.87**	**0.01**	**1.29**	**0.12**	**1.41**	**0.05**	**0.12**	**0.17**		**1,239.15**		**0.07**		**1,240.67**

3.3 Building Construction - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.63	37.37	23.73	0.04		2.54	2.54		2.54	2.54	0.00	4,040.62		0.51		4,051.23
Total	**5.63**	**37.37**	**23.73**	**0.04**		**2.54**	**2.54**		**2.54**	**2.54**	**0.00**	**4,040.62**		**0.51**		**4,051.23**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.22	2.45	1.54	0.00	0.12	0.08	0.20	0.01	0.08	0.09		351.04		0.01		351.26
Worker	0.63	0.72	6.33	0.01	1.17	0.04	1.21	0.04	0.04	0.08		888.11		0.06		889.41
Total	**0.85**	**3.17**	**7.87**	**0.01**	**1.29**	**0.12**	**1.41**	**0.05**	**0.12**	**0.17**		**1,239.15**		**0.07**		**1,240.67**

3.3 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28		4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**		**4,040.62**		**0.46**		**4,050.31**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.20	2.26	1.43	0.00	0.12	0.07	0.19	0.01	0.07	0.08		351.58		0.01		351.78
Worker	0.58	0.66	5.81	0.01	1.17	0.04	1.22	0.04	0.04	0.08		869.29		0.06		870.50
Total	**0.78**	**2.92**	**7.24**	**0.01**	**1.29**	**0.11**	**1.41**	**0.05**	**0.11**	**0.16**		**1,220.87**		**0.07**		**1,222.28**

3.3 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28	0.00	4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**	**0.00**	**4,040.62**		**0.46**		**4,050.31**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.20	2.26	1.43	0.00	0.12	0.07	0.19	0.01	0.07	0.08		351.58		0.01		351.78
Worker	0.58	0.66	5.81	0.01	1.17	0.04	1.22	0.04	0.04	0.08		869.29		0.06		870.50
Total	**0.78**	**2.92**	**7.24**	**0.01**	**1.29**	**0.11**	**1.41**	**0.05**	**0.11**	**0.16**		**1,220.87**		**0.07**		**1,222.28**

3.4 Demolition - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.12	0.00	0.12	0.00	0.00	0.00						0.00
Off-Road	8.86	70.71	42.55	0.07		3.50	3.50		3.50	3.50		7,510.81		0.80		7,527.57
Total	**8.86**	**70.71**	**42.55**	**0.07**	**0.12**	**3.50**	**3.62**	**0.00**	**3.50**	**3.50**		**7,510.81**		**0.80**		**7,527.57**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.03	0.31	0.15	0.00	0.54	0.01	0.55	0.00	0.01	0.01		43.94		0.00		43.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.11	0.97	0.00	0.20	0.01	0.20	0.01	0.01	0.01		144.88		0.01		145.08
Total	**0.13**	**0.42**	**1.12**	**0.00**	**0.74**	**0.02**	**0.75**	**0.01**	**0.02**	**0.02**		**188.82**		**0.01**		**189.05**

3.4 Demolition - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.05	0.00	0.05	0.00	0.00	0.00						0.00
Off-Road	8.86	70.71	42.55	0.07		3.50	3.50		3.50	3.50	0.00	7,510.81		0.80		7,527.57
Total	**8.86**	**70.71**	**42.55**	**0.07**	**0.05**	**3.50**	**3.55**	**0.00**	**3.50**	**3.50**	**0.00**	**7,510.81**		**0.80**		**7,527.57**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.03	0.31	0.15	0.00	0.54	0.01	0.55	0.00	0.01	0.01		43.94		0.00		43.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.11	0.97	0.00	0.20	0.01	0.20	0.01	0.01	0.01		144.88		0.01		145.08
Total	**0.13**	**0.42**	**1.12**	**0.00**	**0.74**	**0.02**	**0.75**	**0.01**	**0.02**	**0.02**		**188.82**		**0.01**		**189.05**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.32					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27		281.19		0.04		282.10
Total	**13.81**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**		**281.19**		**0.04**		**282.10**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.12	0.13	1.16	0.00	0.23	0.01	0.24	0.01	0.01	0.02		173.86		0.01		174.10
Total	**0.12**	**0.13**	**1.16**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**173.86**		**0.01**		**174.10**

3.5 Architectural Coating - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.32					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27	0.00	281.19		0.04		282.10
Total	**13.81**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**	**0.00**	**281.19**		**0.04**		**282.10**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.12	0.13	1.16	0.00	0.23	0.01	0.24	0.01	0.01	0.02		173.86		0.01		174.10
Total	**0.12**	**0.13**	**1.16**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**173.86**		**0.01**		**174.10**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.21	4.67	20.67	0.03	3.24	0.18	3.42	0.11	0.18	0.29		2,820.20		0.16		2,823.52
Unmitigated	2.21	4.67	20.67	0.03	3.24	0.18	3.42	0.11	0.18	0.29		2,820.20		0.16		2,823.52
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	342.50	275.00	305.00	935,112	935,112
Total	342.50	275.00	305.00	935,112	935,112

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Congregate Care (Assisted Living)	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
NaturalGas Unmitigated	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Congregate Care (Assisted Living)	3609.55	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Total		**0.04**	**0.33**	**0.14**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**424.65**		**0.01**	**0.01**	**427.24**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Congregate Care (Assisted Living)	3.60955	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Total		**0.04**	**0.33**	**0.14**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**424.65**		**0.01**	**0.01**	**427.24**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Unmitigated	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.48					0.00	0.00		0.00	0.00						0.00
Consumer Products	2.67					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.36	0.13	10.76	0.00		0.00	0.06		0.00	0.06		18.79		0.02		19.23
Total	**3.51**	**0.13**	**10.76**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**18.79**		**0.02**	**0.00**	**19.23**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.48					0.00	0.00		0.00	0.00						0.00
Consumer Products	2.67					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.36	0.13	10.76	0.00		0.00	0.06		0.00	0.06		18.79		0.02		19.23
Total	**3.51**	**0.13**	**10.76**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**18.79**		**0.02**	**0.00**	**19.23**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Freedom Ranch

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Congregate Care (Assisted Living)	125	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Project description

Construction Phase - Assumed construction schedule

Demolition - Assumed size of existing facility

Architectural Coating - SDAPCD Rule 67.0

Woodstoves - No fireplaces assumed

Area Coating - SDAPCD Rule 67.0

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	6.85	52.09	32.99	0.06	6.38	3.01	9.39	3.32	3.01	6.32	0.00	5,400.34	0.00	0.62	0.00	5,413.27
2013	28.78	111.68	77.72	0.13	2.38	6.19	8.57	0.07	6.19	6.26	0.00	13,517.87	0.00	1.40	0.00	13,547.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	6.85	52.09	32.99	0.06	2.61	3.01	5.61	1.30	3.01	4.31	0.00	5,400.34	0.00	0.62	0.00	5,413.27
2013	28.78	111.68	77.72	0.13	2.31	6.19	8.50	0.07	6.19	6.26	0.00	13,517.87	0.00	1.40	0.00	13,547.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Energy	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Mobile	2.04	4.44	21.01	0.03	3.24	0.18	3.42	0.11	0.18	0.29		3,014.00		0.17		3,017.49
Total	**5.59**	**4.90**	**31.91**	**0.03**	**3.24**	**0.18**	**3.51**	**0.11**	**0.18**	**0.38**	**0.00**	**3,457.44**		**0.20**	**0.01**	**3,463.96**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Energy	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Mobile	2.04	4.44	21.01	0.03	3.24	0.18	3.42	0.11	0.18	0.29		3,014.00		0.17		3,017.49
Total	**5.59**	**4.90**	**31.91**	**0.03**	**3.24**	**0.18**	**3.51**	**0.11**	**0.18**	**0.38**	**0.00**	**3,457.44**		**0.20**	**0.01**	**3,463.96**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.19	0.00	6.19	3.31	0.00	3.31						0.00
Off-Road	6.76	51.98	31.88	0.05		3.00	3.00		3.00	3.00		5,240.07		0.60		5,252.76
Total	**6.76**	**51.98**	**31.88**	**0.05**	**6.19**	**3.00**	**9.19**	**3.31**	**3.00**	**6.31**		**5,240.07**		**0.60**		**5,252.76**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.11	1.11	0.00	0.20	0.01	0.20	0.01	0.01	0.01		160.28		0.01		160.50
Total	**0.10**	**0.11**	**1.11**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**160.28**		**0.01**		**160.50**

3.2 Grading - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.41	0.00	2.41	1.29	0.00	1.29						0.00
Off-Road	6.76	51.98	31.88	0.05		3.00	3.00		3.00	3.00	0.00	5,240.07		0.60		5,252.76
Total	**6.76**	**51.98**	**31.88**	**0.05**	**2.41**	**3.00**	**5.41**	**1.29**	**3.00**	**4.29**	**0.00**	**5,240.07**		**0.60**		**5,252.76**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.11	1.11	0.00	0.20	0.01	0.20	0.01	0.01	0.01		160.28		0.01		160.50
Total	**0.10**	**0.11**	**1.11**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**160.28**		**0.01**		**160.50**

3.3 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.63	37.37	23.73	0.04		2.54	2.54		2.54	2.54		4,040.62		0.51		4,051.23
Total	**5.63**	**37.37**	**23.73**	**0.04**		**2.54**	**2.54**		**2.54**	**2.54**		**4,040.62**		**0.51**		**4,051.23**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.21	2.40	1.37	0.00	0.12	0.08	0.20	0.01	0.08	0.09		353.78		0.01		354.00
Worker	0.58	0.66	6.66	0.01	1.17	0.04	1.21	0.04	0.04	0.08		961.66		0.06		963.01
Total	**0.79**	**3.06**	**8.03**	**0.01**	**1.29**	**0.12**	**1.41**	**0.05**	**0.12**	**0.17**		**1,315.44**		**0.07**		**1,317.01**

3.3 Building Construction - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.63	37.37	23.73	0.04		2.54	2.54		2.54	2.54	0.00	4,040.62		0.51		4,051.23
Total	**5.63**	**37.37**	**23.73**	**0.04**		**2.54**	**2.54**		**2.54**	**2.54**	**0.00**	**4,040.62**		**0.51**		**4,051.23**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.21	2.40	1.37	0.00	0.12	0.08	0.20	0.01	0.08	0.09		353.78		0.01		354.00
Worker	0.58	0.66	6.66	0.01	1.17	0.04	1.21	0.04	0.04	0.08		961.66		0.06		963.01
Total	**0.79**	**3.06**	**8.03**	**0.01**	**1.29**	**0.12**	**1.41**	**0.05**	**0.12**	**0.17**		**1,315.44**		**0.07**		**1,317.01**

3.3 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28		4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**		**4,040.62**		**0.46**		**4,050.31**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.19	2.22	1.27	0.00	0.12	0.07	0.19	0.01	0.07	0.08		354.38		0.01		354.58
Worker	0.53	0.61	6.12	0.01	1.17	0.04	1.22	0.04	0.04	0.08		941.49		0.06		942.74
Total	**0.72**	**2.83**	**7.39**	**0.01**	**1.29**	**0.11**	**1.41**	**0.05**	**0.11**	**0.16**		**1,295.87**		**0.07**		**1,297.32**

3.3 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28	0.00	4,040.62		0.46		4,050.31
Total	**5.17**	**34.66**	**23.45**	**0.04**		**2.28**	**2.28**		**2.28**	**2.28**	**0.00**	**4,040.62**		**0.46**		**4,050.31**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.19	2.22	1.27	0.00	0.12	0.07	0.19	0.01	0.07	0.08		354.38		0.01		354.58
Worker	0.53	0.61	6.12	0.01	1.17	0.04	1.22	0.04	0.04	0.08		941.49		0.06		942.74
Total	**0.72**	**2.83**	**7.39**	**0.01**	**1.29**	**0.11**	**1.41**	**0.05**	**0.11**	**0.16**		**1,295.87**		**0.07**		**1,297.32**

3.4 Demolition - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.12	0.00	0.12	0.00	0.00	0.00						0.00
Off-Road	8.86	70.71	42.55	0.07		3.50	3.50		3.50	3.50		7,510.81		0.80		7,527.57
Total	**8.86**	**70.71**	**42.55**	**0.07**	**0.12**	**3.50**	**3.62**	**0.00**	**3.50**	**3.50**		**7,510.81**		**0.80**		**7,527.57**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.03	0.30	0.14	0.00	0.54	0.01	0.55	0.00	0.01	0.01		44.17		0.00		44.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.10	1.02	0.00	0.20	0.01	0.20	0.01	0.01	0.01		156.91		0.01		157.12
Total	**0.12**	**0.40**	**1.16**	**0.00**	**0.74**	**0.02**	**0.75**	**0.01**	**0.02**	**0.02**		**201.08**		**0.01**		**201.32**

3.4 Demolition - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.05	0.00	0.05	0.00	0.00	0.00						0.00
Off-Road	8.86	70.71	42.55	0.07		3.50	3.50		3.50	3.50	0.00	7,510.81		0.80		7,527.57
Total	**8.86**	**70.71**	**42.55**	**0.07**	**0.05**	**3.50**	**3.55**	**0.00**	**3.50**	**3.50**	**0.00**	**7,510.81**		**0.80**		**7,527.57**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.03	0.30	0.14	0.00	0.54	0.01	0.55	0.00	0.01	0.01		44.17		0.00		44.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.10	1.02	0.00	0.20	0.01	0.20	0.01	0.01	0.01		156.91		0.01		157.12
Total	**0.12**	**0.40**	**1.16**	**0.00**	**0.74**	**0.02**	**0.75**	**0.01**	**0.02**	**0.02**		**201.08**		**0.01**		**201.32**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.32					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27		281.19		0.04		282.10
Total	**13.81**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**		**281.19**		**0.04**		**282.10**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.12	1.22	0.00	0.23	0.01	0.24	0.01	0.01	0.02		188.30		0.01		188.55
Total	**0.11**	**0.12**	**1.22**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**188.30**		**0.01**		**188.55**

3.5 Architectural Coating - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.32					0.00	0.00		0.00	0.00						0.00
Off-Road	0.49	2.96	1.94	0.00		0.27	0.27		0.27	0.27	0.00	281.19		0.04		282.10
Total	**13.81**	**2.96**	**1.94**	**0.00**		**0.27**	**0.27**		**0.27**	**0.27**	**0.00**	**281.19**		**0.04**		**282.10**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.12	1.22	0.00	0.23	0.01	0.24	0.01	0.01	0.02		188.30		0.01		188.55
Total	**0.11**	**0.12**	**1.22**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**188.30**		**0.01**		**188.55**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.04	4.44	21.01	0.03	3.24	0.18	3.42	0.11	0.18	0.29		3,014.00		0.17		3,017.49
Unmitigated	2.04	4.44	21.01	0.03	3.24	0.18	3.42	0.11	0.18	0.29		3,014.00		0.17		3,017.49
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	342.50	275.00	305.00	935,112	935,112
Total	342.50	275.00	305.00	935,112	935,112

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Congregate Care (Assisted Living)	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
NaturalGas Unmitigated	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Congregate Care (Assisted Living)	3609.55	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Total		**0.04**	**0.33**	**0.14**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**424.65**		**0.01**	**0.01**	**427.24**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Congregate Care (Assisted Living)	3.60955	0.04	0.33	0.14	0.00		0.00	0.03		0.00	0.03		424.65		0.01	0.01	427.24
Total		**0.04**	**0.33**	**0.14**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**		**424.65**		**0.01**	**0.01**	**427.24**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Unmitigated	3.51	0.13	10.76	0.00		0.00	0.06		0.00	0.06	0.00	18.79		0.02	0.00	19.23
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.48					0.00	0.00		0.00	0.00						0.00
Consumer Products	2.67					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.36	0.13	10.76	0.00		0.00	0.06		0.00	0.06		18.79		0.02		19.23
Total	**3.51**	**0.13**	**10.76**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**18.79**		**0.02**	**0.00**	**19.23**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.48					0.00	0.00		0.00	0.00						0.00
Consumer Products	2.67					0.00	0.00		0.00	0.00						0.00
Hearth	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00	0.00	0.00
Landscaping	0.36	0.13	10.76	0.00		0.00	0.06		0.00	0.06		18.79		0.02		19.23
Total	**3.51**	**0.13**	**10.76**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**18.79**		**0.02**	**0.00**	**19.23**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation