INVESTIGATIVE SCIENCE AND ENGINEERING, INC.
Scientific, Environmental, and Forensic Consultants

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February 12, 2007

Mr. Brock Parry
Black Gold, LLC
9338 Bond Ave
San Diego, CA 92021

RE: RESPONSE TO COMMENTS – ACOUSTICAL
TPM 20974, P05-036 – SAN DIEGO, CA
ISE REPORT #06-031

Dear Mr. Parry:

At your request, Investigative Science and Engineering (ISE) have examined the iteration comments prepared by the County of San Diego, Department of Planning and Land Use with regard to the Black Gold acoustical site assessment. Our responses and actions are provided in this summary letter. The comment number shown refers to the designation number given in the original County letter dated November 8,2006.

The following comments were addressed:

Comment #	Response
1	Table 4 on Page 14 of this report provides receptor sound predictions for locations identified in Figures 8a and –b.
2	Refer to comment response 1.
3	Table 3 on Page 13 discusses the noise sources.
4	Table 3 on Page 13 discusses the proposed usage of the proposed equipment. All equipment proposed would be in compliance with the County Noise Ordinance.
5	This comment indicates that there was a typo in the report. This typo has been corrected.
6	A discussion was added to Page 12 of the revised report.
7	The Proposed Gas Station is shown in Figure 7 of the revised report. The identification #'s 3 through 12.
8	Table 3 of the revised report provides the noise source information that the County is requesting.

It should be noted that incorporating the additional requests by the County, the original page numbering has changed. Should you have any questions regarding the above revisions, please do not hesitate to contact me at (858) 451-3505.

Sincerely,

Rick Tavares, Ph.D.
Project Principal
Investigative Science and Engineering, Inc.

Cc: Ryan Taylor, ISE

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January 18, 2007 (Revised)

Mr. Brock Parry
Black Gold, LLC
9338 Bond Ave
San Diego, CA 92021

RE: PROGRAMMATIC ACOUSTICAL SITE ASSESSMENT
TPM 20974, P05-036 – SAN DIEGO, CA
ISE REPORT #06-031

Dear Mr. Parry:

At your request, Investigative Science and Engineering (ISE) have performed an acoustical site assessment of the proposed TPM 20974 project located in the County of San Diego, California. The results of that survey, as well as predicted future noise levels at the project site, are presented in this letter report.

INTRODUCTION AND DEFINITIONS

Existing Site Characterization

The proposed TPM 20974 development site consists of approximately 3.86 acres within the County of San Diego, CA. The project site is located on the north side of Olde Highway 80 between Pecan Park Lane West and Pecan Park Lane East in the Lake Jennings Area of San Diego County. An aerial photo of the project area and surrounding community is shown in Figure 1 on Page 2 of this report.

The proposed project is currently zoned C36 and does not propose any land use changes. The site area is currently resides as undeveloped open space with no structures on site. The onsite elevations range from approximately 680 to 755 feet above mean sea level (MSL) as can be seen in Figure 2 on Page 3.

Project Description

The proposed TPM 20974 project site will convert the 3.86 acre lot of vacant land into 3 parcels with a Major Use Permit (MUP) for a 24-hour car wash facility as well as a proposed coffee shop. The coffee shop would be expected to operate between the hours of 5 am to 10 pm Monday through Sunday. The project will also have a private fuel filling depot and could be expected to operate 24-hours a day. Additionally, the project proposes an office building and a warehouse building which would have operational hours from 8 am to 5 pm Monday through Friday. A site development plan can be seen on Figure 3 on Page 4 of this report.

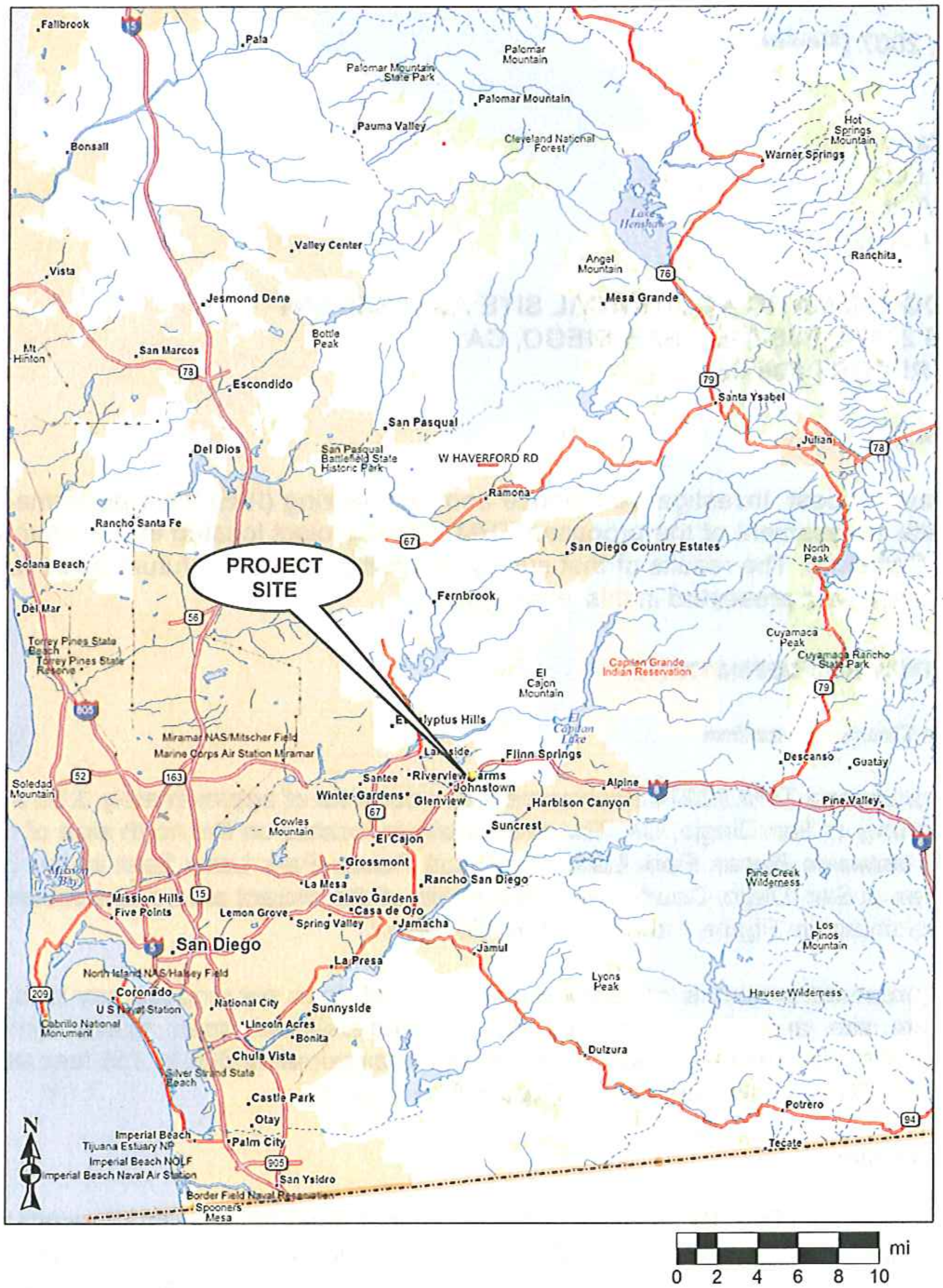

FIGURE 1: Project Vicinity Map – Proposed TPM 20974 Site (ISE 8/06)

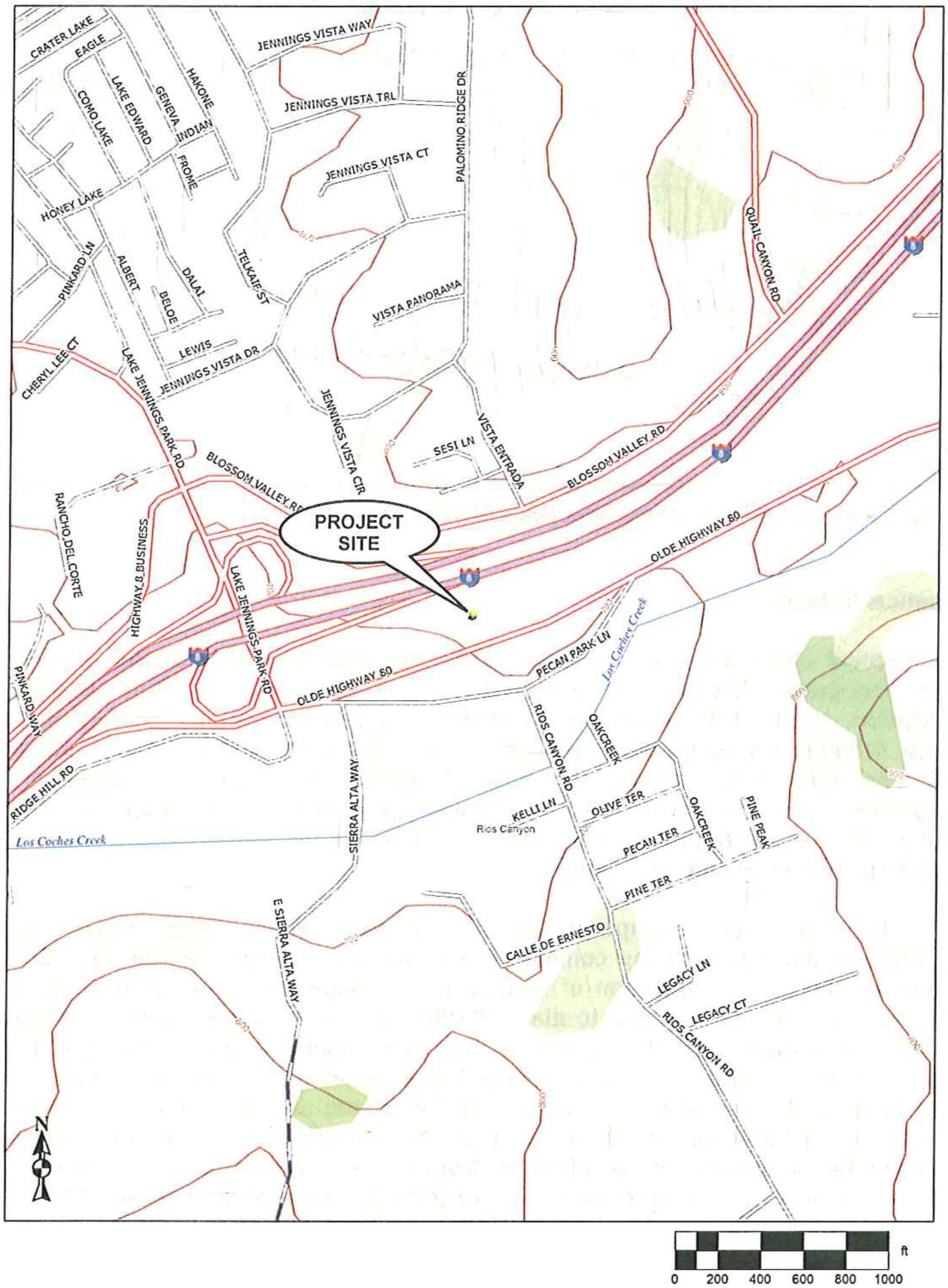

FIGURE 2: Project Site Map – TPM 20974 (ISE 8/06)

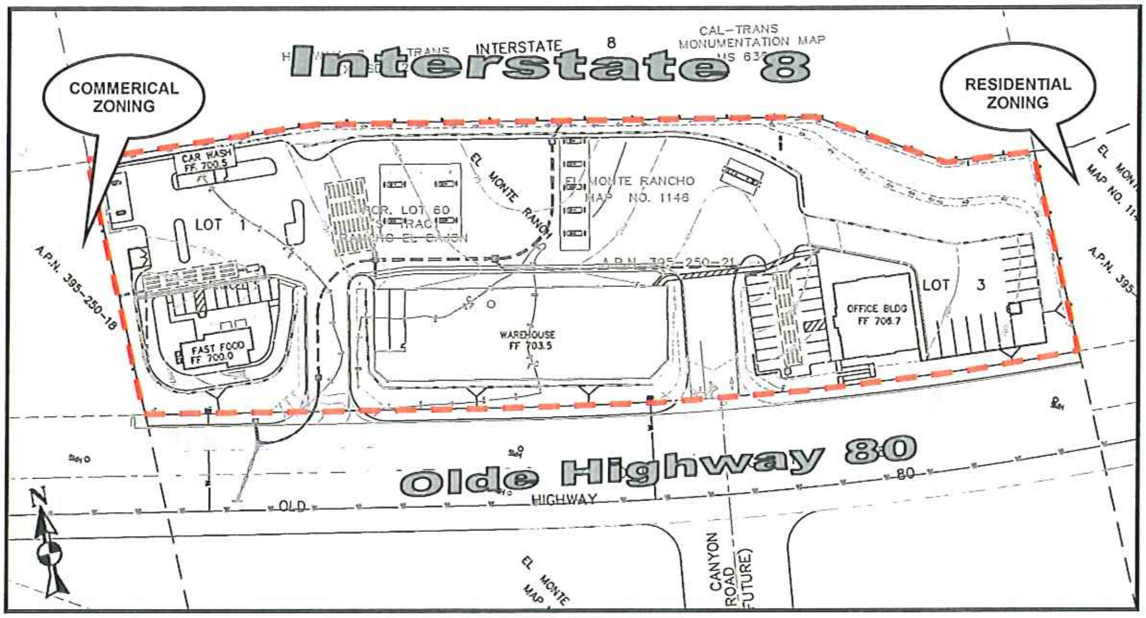

FIGURE 3: Proposed TPM 20974 Site Plan (Hale Engineering, 5/06)

Acoustical Definitions

Sound waves are linear mechanical waves. They can be propagated in solids, liquids, and gases. The material transmitting such a wave oscillates in the direction of propagation of the wave itself. Sound waves originate from some sort of vibrating surface. Whether this surface is the vibrating string of a violin or a person's vocal cords, a vibrating column of air from an organ or clarinet, or a vibrating panel from a loudspeaker, drum, or aircraft, the sound waves generated are all similar. All of these vibrating elements alternately compress the surrounding air during forward motion and expand it on the backward movement.

There is a large range of frequencies within which linear waves can be generated, sound waves being confined to the frequency range that can stimulate the auditory organs to the sensation of hearing. For humans this range is from about 20 Hertz (Hz or cycles per second) to about 20,000 Hz. The air transmits these frequency disturbances outward from the source of the wave. Sound waves, if unimpeded, will spread out in all directions from a source. Upon entering the auditory organs, these waves produce the sensation of sound. Waveforms that are approximately periodic or consist of a small number of periodic components can give rise to a pleasant sensation (assuming the intensity is not too high), for example, as in a musical composition. Noise, on the other hand, can be represented as a superposition of periodic waves with a large number of components.

Noise is generally defined as unwanted or annoying sound that is typically associated with human activity and which interferes with or disrupts normal activities. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise, the perceived importance of the noise and its appropriateness in the setting, the time of day, and the sensitivity of the individual hearing the sound.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric levels. The loudest sounds that the human ear can hear comfortably are approximately one trillion (or $1x10^{12}$) times the acoustic energy that the ear can barely detect. Because of this vast range, any attempt to represent the acoustic intensity of a particular sound on a linear scale becomes unwieldy. As a result, a logarithmic ratio originally conceived for radio work known as the decibel (dB) is commonly employed.

A sound level of zero "0" dB is scaled such that it is defined as the threshold of human hearing and would be barely audible to a human of normal hearing under extremely quiet listening conditions. Such conditions can only be generated in anechoic or "dead rooms". Typically, the quietest environmental conditions (extreme rural areas with extensive shielding) yield sound levels of approximately 20 dB. Normal speech has a sound level of approximately 60 dB. Sound levels above 120 dB roughly correspond to the threshold of pain and would be associated with sources such as jet engine noise or pneumatic equipment.

The minimum change in sound level that the human ear can detect is approximately 3 dB. A change in sound level of 10 dB is usually perceived by the average person as a doubling (or halving) of the sounds loudness. A change in sound level of 10 dB actually represents an approximate 90 percent change in the sound intensity, but only about a 50 percent change in the perceived loudness. This is due to the nonlinear response of the human ear to sound.

As mentioned above, most of the sounds we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies differing in sound level. The intensities of each frequency add to generate the sound we hear. The method commonly used to quantify environmental sounds consists of determining all of the frequencies of a sound according to a weighting system that reflects the nonlinear response characteristics of the human ear. This is called "A" weighting, and the decibel level measured is called the A-weighted sound level (or dBA). In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve.

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of sounds from distant sources that create a relatively steady background noise in which no particular source is identifiable. For this type of noise, a single descriptor called the Leq (or equivalent sound level) is used. Leq is the energy-mean A-weighted sound level during a measured time interval. It is the 'equivalent' constant sound level that would have to be produced by a given source to equal the average of the fluctuating level measured. For most acoustical studies, the study interval is generally taken as one-hour and is abbreviated *Leq-h*; however, other time intervals are utilized depending on the jurisdictional preference.

To describe the time-varying character of environmental noise, the statistical noise descriptors L10, L50, and L90 are commonly used. They are the noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of a stated time. Sound levels associated with the L10 typically describe transient or short-term events, while levels associated with the L90 describe the steady state (or most prevalent) noise conditions. In addition, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum and minimum measured sound level (Lmax and Lmin) indicators. The Lmin value obtained for a particular monitoring location is often called the *acoustic floor* for that location.

APPLICABLE SIGNIFICANCE CRITERIA

County of San Diego Noise Regulations

Transportation noise levels in the County of San Diego are governed under Policy 4b in the Noise Element of the County's General Plan. The relevant sections of the Noise Element are cited below and would apply to County defined "Noise Sensitive Areas" applicable to paragraph 1 through 4 of Policy 4b.

1. "Noise Sensitive Area" means the building site of any residence, hospital, school, library, or similar facility where quiet is an important attribute of the environment.
2. Whenever possible, development in San Diego County should be planned and constructed so that noise sensitive areas are not subject to noise levels in excess if 55 dBA CNEL.
3. Whenever it appears that new development will result in any (existing or future) noise sensitive areas being subjected to noise levels in excess of 60 dBA CNEL or greater, an acoustical study should be required.
4. If the acoustical study shows that noise levels at any noise sensitive areas will exceed 60 dBA CNEL, the development should not be approved unless the following findings are made:
    a) Modifications to the development have been or will be made which reduce the exterior noise level below 60 dBA CNEL; or,
    b) If, with the current noise abatement technology, it is infeasible to reduce the exterior CNEL to 60 dBA, then modifications to the development will be made which reduce interior noise below a CNEL equal to 45 dBA. Particular attention shall be given to noise sensitive interior spaces such as bedrooms; and,
    c) If finding 'b' above is made, a further finding will be made that there are specifically identified overriding social or economic considerations which warrant approval of the development without modifications as described in 'a' above.

4) If the acoustical study shows that the noise levels at any noise sensitive areas will exceed 75 dBA CNEL; the development should not be approved.
5) Interior noise levels should not exceed 45 dBA CNEL within any habitable living space of any residential unit.
6) For rooms in "Noise Sensitive Areas", which are usually occupied only a part of the day (schools, libraries, or similar), the interior one-hour average sound level, due to noise outside, should not exceed 50 decibels

Operational Noise Standards

The San Diego County Noise Ordinance Section 36.404 governs fixed source and/or operational noise. The applicable sound levels are a function of the time of day and the land use zone. Sound levels are measured at the boundary of the property containing the noise source. The relevant limits are given below in Table 1. In the case where two adjacent property lines differ in zoning, the applicable threshold would be the arithmetic average of the two standards.

TABLE 1: County of San Diego Noise Ordinance Limits

Land Use Zone	Time of Day	1-Hour Average Sound Level (dBA Leq)
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, and R-U	7 am to 10 pm 10 pm to 7 am	50 45
R-R0, R-C, R-M, C-30, and S-86	7 am to 10 pm 10 pm to 7 am	55 50
S-94 and other commercial zones	7 am to 10 pm 10 pm to 7 am	60 55
M-50, M-52, and M-54	any time	70
S-82 and M-58	any time	70

Source: County of San Diego Noise Ordinance Section 36.404, 1981.

The proposed TPM 20974 development is zoned C36 (General Commercial) as well as the adjacent land use to the southeast. The standard for this zoning at the property line would be a one-hour average sound level of 60 dBA between the hours of 7 am and 10 pm and a one-hour average sound level of 55 dBA between the hours of 10 pm and 7 am. Adjacent land use to the northeast is zoned RS4 Single-family Residential that allows a one-hour average sound level of 50 dBA between the hours of 7 am and 10 pm and a one-hour average sound level of 45 dBA between the hours of 10 pm and 7 am. Thus, because of the two zones being adjacent to each other the arithmetic average will be a one-hour average sound level of 55 dBA between the hours of 7 am and 10 pm and a one-hour sound level of 50 dBA between the hours of 10pm and 7 am at the property line.

ANALYSIS METHODOLOGY

Project Noise Monitoring Procedures

A Quest Model 2900 ANSI Type 2 integrating sound level meter was used as the data collection device. The meter was placed in one location on the proposed site (denoted as ML1), which was mounted to a tripod approximately five feet above the ground and was placed at the project frontage with a representative worst-case noise exposure. The monitoring location onsite is shown graphically in Figures 4a through -c below.

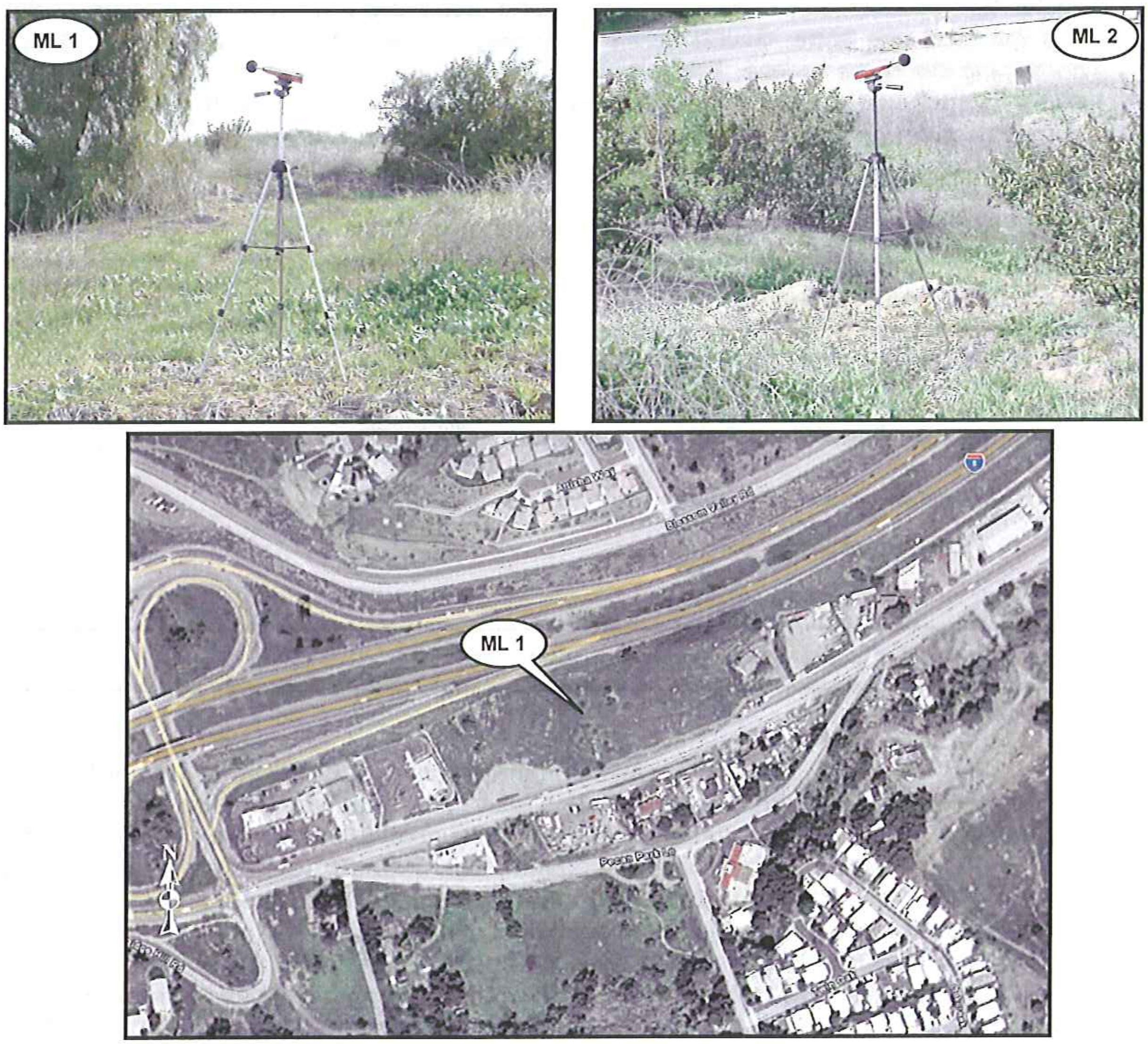

FIGURE 4a through -c: Ambient Noise Monitoring Locations (ISE 2/06)

Sound levels for the proposed car wash facility were assumed to be similar to existing car wash facilities within San Diego. ISE selected a drive through car wash facility off of Ranch Penasquitos Boulevard near Interstate 15. The second and third monitoring locations (ML 2, ML 3), which were set up in a similar fashion to that of ML 1, were taken at both the entrance to and exit from locations of the aforementioned facility.

The typical car wash cycle is comprised of a vehicle entering into the facility and stopping at a fixed location in center of the washing apparatus. Then the car is washed with various cleansers and then rinsed. Once the cleaning process is complete the driver would then exit the facility. As the vehicle exits the high velocity air blowers removes the excess water from the previous rinse cycle. The typical blowdown events last for approximately 60 seconds of each wash cycle (about a 5 minute headways between cars). The noise monitoring data was taken during the loudest operation cycle or the air. The monitoring locations are shown in Figure 6a and -b below.

FIGURE 5a and -b: Car Wash Operational Noise Measurements (ISE 8/06)

Fuel Island sound level assumptions were taken from a previous acoustical analysis and should be similar to the sound levels within the proposed site plan. The field data measurements within this report are denoted as ML 4 which is shown in Figure 6 Below.

These measurements occurred on various days between February 1, 2006 and August 8, 2006. The actual date and time of each event is denoted within the Field Measurement Table (Table 2) on Page 11 of this report. All measurements were taken during the assumed worst-case noise generation time for the event. All equipment was calibrated before testing at ISE's acoustics and vibration laboratory to verify conformance with ANSI S1-4 1983 Type 2 and IEC 651 Type 2 standards.

Onsite Noise Analysis Procedure

Dominant onsite noise sources, consisting of observed typical service fuel islands, car wash activities, car vacuums, HVAC units, warehouse operations, and idling truck noise levels were modeled using the ISE *Industrial Source* computation model *Version 3* (*IS3*). The IS3 model calculates the predicted acoustic field pattern using a vector-based summation of all source-receptor pairs. The resulting output consists of an isogram containing the predicted acoustic field accounting for refraction and structural attenuation.

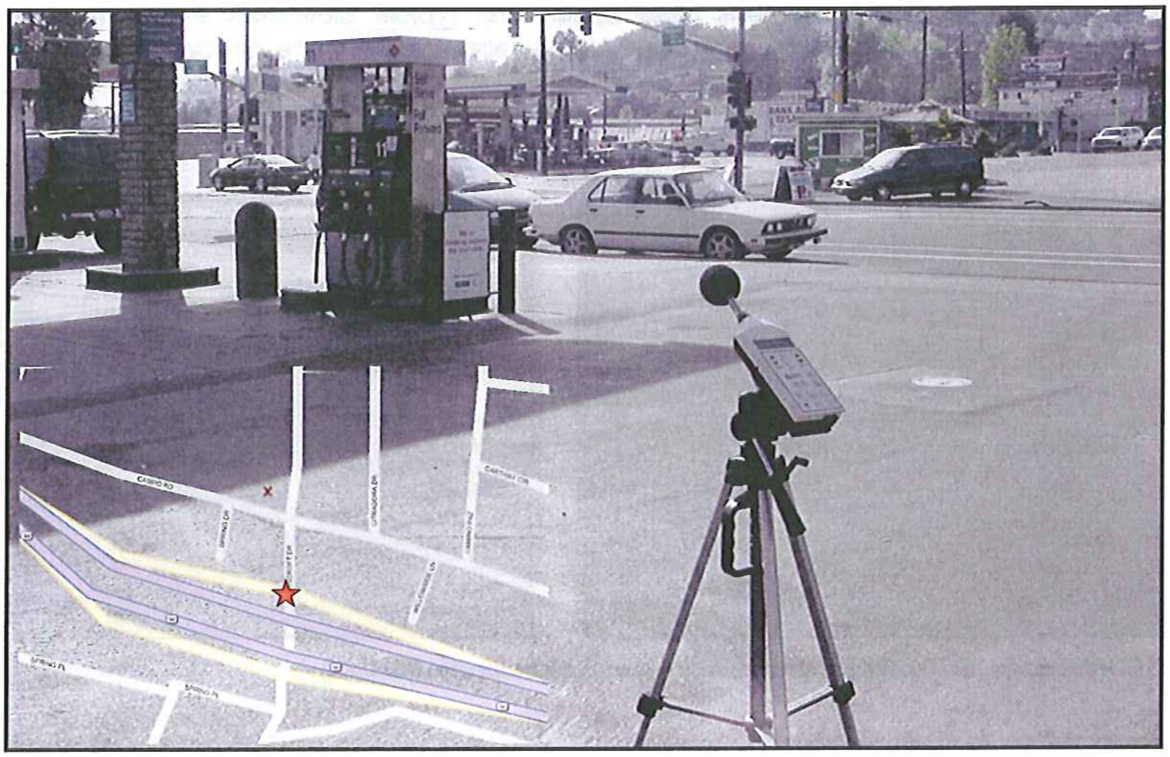

FIGURE 6: Gas Station Operational Noise Measurement (ISE 1/06)

The data within this analysis came from direct measurements ML 1 through ML 4 as well as highly unlikely worst-case assumptions or equipment spec sheets for the proposed operations. All the project data is set to a corrected reference distance of 3 feet. The modeling assumptions will be discussed further under the Findings and Recommendations section beginning below.

FINDINGS / RECOMMENDATIONS

Existing Ambient Noise Conditions

Testing conditions during the monitoring periods were sunny with wind speeds below data contamination velocities. The approximate mean temperatures ranged between 70 to 90 degrees Fahrenheit. The results of the sound level monitoring are shown below in Table 2. The values for the equivalent sound level (Leq-h), the maximum and minimum measured sound levels (Lmax and Lmin), and the statistical indicators L10, L50, and L90, are given for each monitoring location.

TABLE 2: Measured Ambient Sound Levels – Proposed TPM 20974 Site

		1-Hour Noise Level Descriptors in dBA					
Site	Start Time	Leq	Lmax	Lmin	L10	L50	L90
ML 1	4/11/06 - 3:00 PM	64.8	70.2	52.2	65.6	61.9	58.9
ML 2	8/8/06 - 2:00 PM	61.7	64.7	55.0	64.3	61.4	56.1
ML 3	8/8/06 - 2:10 PM	70.7	71.4	64.0	71.2	70.9	68.0
ML 4	2/1/06 - 3:00 PM	63.3	78.0	58.7	66.0	61.6	60.0

Monitoring Locations:

- ML 1: Center portion of project site facing I-8.
  GPS N32° 50.681' x W116° 52.689'
- ML 2: Approximately 25' from the entrance to the Car Wash Facility during the typical drying cycle.
- ML 3: Approximately 25' from the exit to the Car Wash Facility during the typical drying cycle.
- ML 4: Typical Gas Station Facility near an active freeway (SR-94).
  GPS N32° 45.107' x W117° 00.068'

Noise levels on the proposed development site were consistent with the observed community setting and topography. The value for the equivalent sound level (Leq-h) for the project site was approximately 64.8 dBA. Background noise levels (i.e., L90 levels) were lower than their energy equivalent counterparts (Leq-h) indicating the relative cyclic traffic movement on I-8 traveling into or out of El Cajon. The acoustic floor, as indicated by the Lmin metric, was approximately 52.2 dBA.

Noise levels within the typical service station facility specifically at the pumps were found to average approximately 63 dBA Leq-h at approximately 25 feet with maximum levels reaching 78 dBA from cars driving by the equipment. The monitoring event at the fuel islands were taken for a period of one-hour. For modeling purposes the

Leq-h was assumed to be the "worst-case" and most accurate representation of the fuel pump sound generation.

Short term noise levels around the car wash service facility were found to produce maximum sound levels of approximately 65 dBA at a given distance 25 feet from the entrance of the carwash and approximately 71 dBA at a given distance of 25 feet from the exit side of the facility or were the air drying of the vehicles takes place. Sound measurements were only taken during the air-drying event which was clearly the loudest part of a typical car wash cycle.

Generally conservative assumptions were made for the Warehouse delivery trucks, internal warehouse operations and car wash vacuums. The warehouse facility will utilize one electric forklift. The Internal noise within the facility is not expected to be high. ISE assumed there to be nine separate noise generators with a 15 % duty cycle each. This would correspond to nine sound generating sources each producing 77 dBA of sound energy.

The warehouse would have two bays from which trucks could pick-up or deliver materials. The modeling assumptions at the loading dock are shown as source 19 through 21 on Figure 7 below. It was assumed that each truck produces approximately 88 dBA towards the front of the truck as well as 88 dBA towards the end of the truck. These assumptions will be noise estimates at three feet.

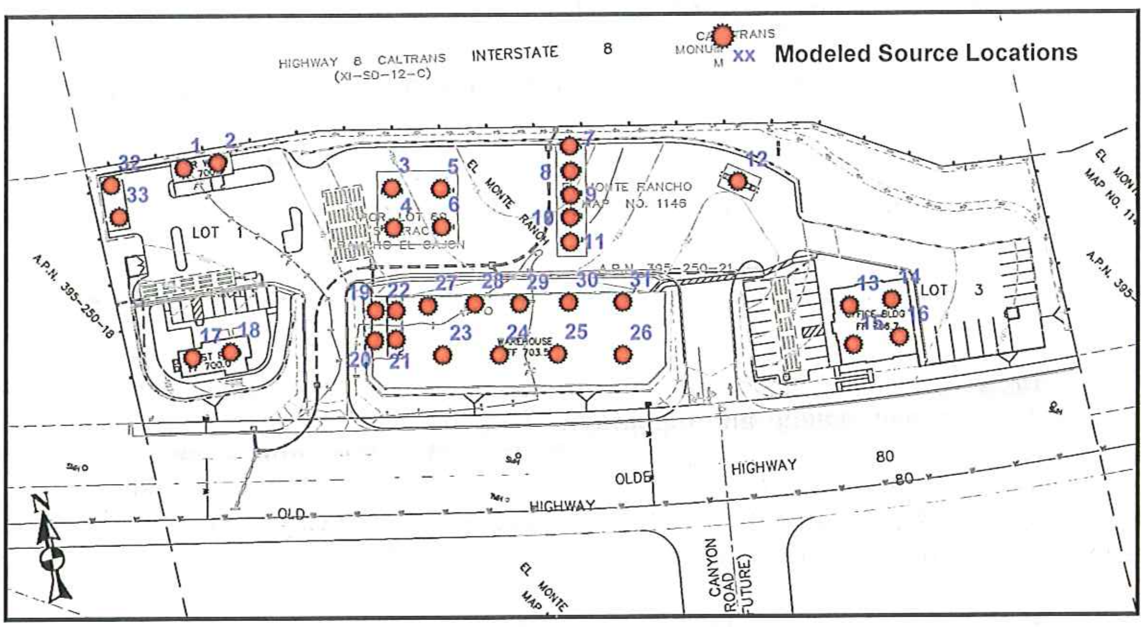

FIGURE 7: Equipment Identification Chart (ISE, 8/06)

Expected Operational Noise Levels

The project site is expected to have a typical operational noise level of a moderately busy gas station with an ambient noise level similar to the collected field data shown above. Utilizing the ISE *IS3* noise field model, a rectangular grid of receptor points within the vicinity of the proposed project and nearby residential and commercial areas was created. Figure 7 above shows all the proposed equipment locations. The model includes the proposed structural buildings and topography. The overall site characteristics are shown on the project site plans. The sound acoustical projections to the west are characteristic of the 18-foot elevation drop 13 feet from the edge of the property line between the proposed project and the adjacent commercial project to the west.

The results are shown in Figures 8a and -b below. The figures show a color contour plot of the radiated noise superimposed atop an aerial photograph on the proposed project development site at each property line during either daytime conditions or nighttime conditions. The model input deck and output plot is also provided as an attachment to this report.

The color-shaded areas represent areas of equal noise exposure within the height of the surrounding residential property line and are a composite of the 19,576 data points generated by the computer model. Table 3 identifies the tonnage at each location identified in Figure 6.

Based on discussions with the County of San Diego, Six (6) receptor locations were chosen along the shared commercial property line to the west and the residential property line to the east. Table 4 shows what the predicted sound pressure levels will be assuming that the assumed sound sources are operating as described in Table 3 above. The representative receptor locations are also shown in Figures 8a and –b below. Based upon the findings, no significant property line impacts due to the worst-case operations are expected. No remedial mitigation is warranted.

TABLE 3: Equipment Identification Chart

Location	Equipment Type	SPL (dBA@ Reference Distance)	Duty Cycle	Corrected SPL @ 3'
1	Carwash Activities (Exit)	71@25feet (see ML3)	25%	83
2	Carwash Activities (Entrance)	65@25feet (see ML2)	25%	77
3	Fuel Pump Island	63@25feet (See ML4)	100%	81
4	Fuel Pump Island	63@25feet (See ML4)	100%	81
5	Fuel Pump Island	63@25feet (See ML4)	100%	81
6	Fuel Pump Island	63@25feet (See ML4)	100%	81
7	Fuel Pump Island	63@25feet (See ML4)	100%	81
8	Fuel Pump Island	63@25feet (See ML4)	100%	81
9	Fuel Pump Island	63@25feet (See ML4)	100%	81
10	Fuel Pump Island	63@25feet (See ML4)	100%	81
11	Fuel Pump Island	63@25feet (See ML4)	100%	81
12	Fuel Pump Island	63@25feet (See ML4)	100%	81

TABLE 3 Cont.: Equipment Identification Chart

Location	Equipment Type	SPL (dBA@ Reference Distance)	Duty Cycle	Corrected SPL @ 3'
13	Carrier Model 24ACR3 - 60	75@3feet (see Cut sheet)	100%	75
14	Carrier Model 24ACR3 - 60	75@3feet (see Cut sheet)	100%	75
15	Carrier Model 24ACR3 - 60	75@3feet (see Cut sheet)	100%	75
16	Carrier Model 24ACR3 - 60	75@3feet (see Cut sheet)	100%	75
17	Carrier Model 24ACR3 - 60	75@3feet (see Cut sheet)	100%	75
18	Carrier Model 24ACR3 - 60	75@3feet (see Cut sheet)	100%	75
19	Idling Truck/ Loading Dock	88@3feet (assumed)	10%	78
20	Idling Truck/ Loading Dock	88@3feet (assumed)	10%	78
21	Idling Truck/ Loading Dock	88@3feet (assumed)	10%	78
22	Idling Truck/ Loading Dock	88@3feet (assumed)	10%	78
23	Internal Warehouse Operations	85@3feet (assumed)	15%	77
24	Internal Warehouse Operations	85@3feet (assumed)	15%	77
25	Internal Warehouse Operations	85@3feet (assumed)	15%	77
26	Internal Warehouse Operations	85@3feet (assumed)	15%	77
27	Internal Warehouse Operations	85@3feet (assumed)	15%	77
28	Internal Warehouse Operations	85@3feet (assumed)	15%	77
29	Internal Warehouse Operations	85@3feet (assumed)	15%	77
30	Internal Warehouse Operations	85@3feet (assumed)	15%	77
31	Internal Warehouse Operations	85@3feet (assumed)	15%	77
32	Car Wash Vacuums	85@3feet (assumed)	40%	81
33	Car Wash Vacuums	85@3feet (assumed)	40%	81

TABLE 4: Receptor Sound Level Prediction Chart

Location	Property Line	Predicted Sound Pressure Level (dBA)
1	West	45
2	West	44
3	West	43
4	East	42
5	East	41
6	East	38

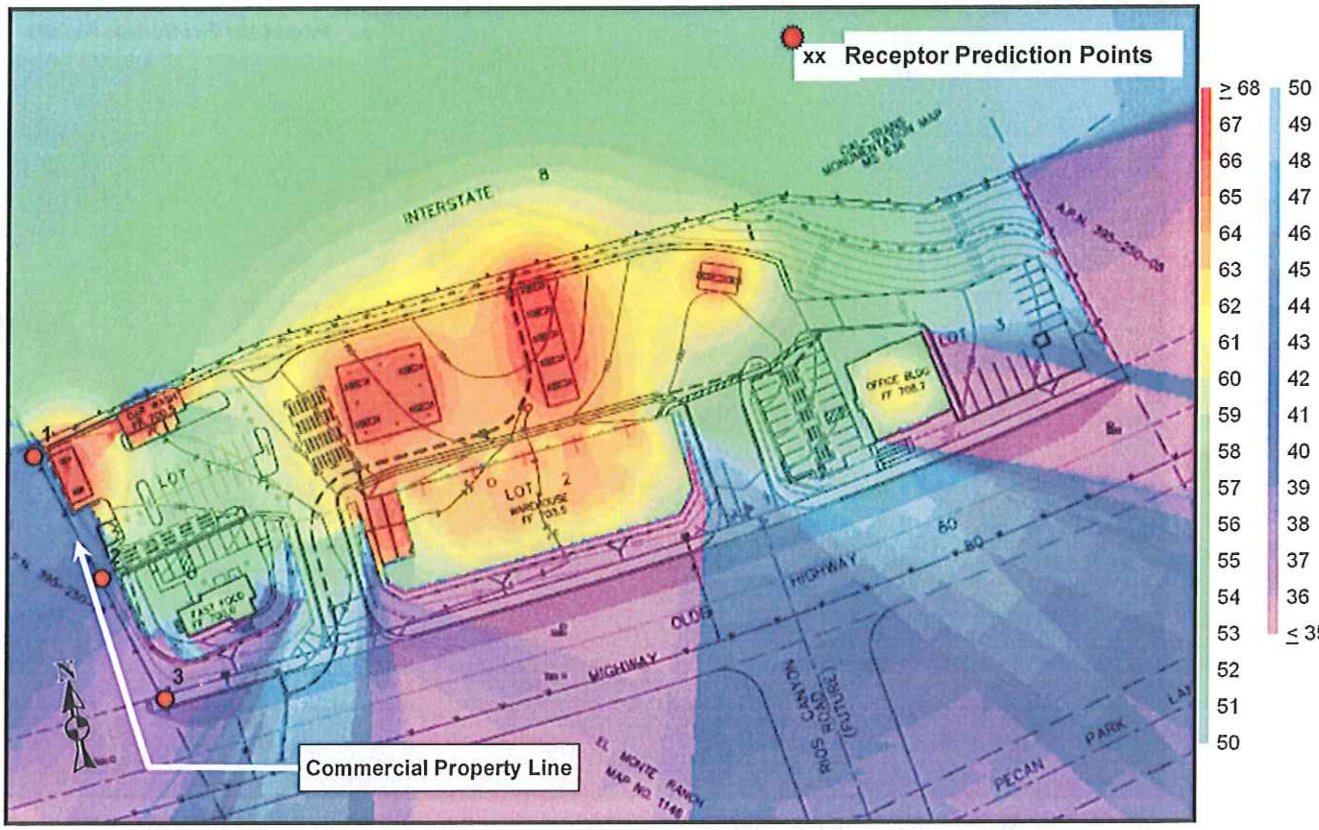

FIGURE 8a: Worst Case Noise Exposure Plot for West Property Line Conditions (ISE, 1/07)

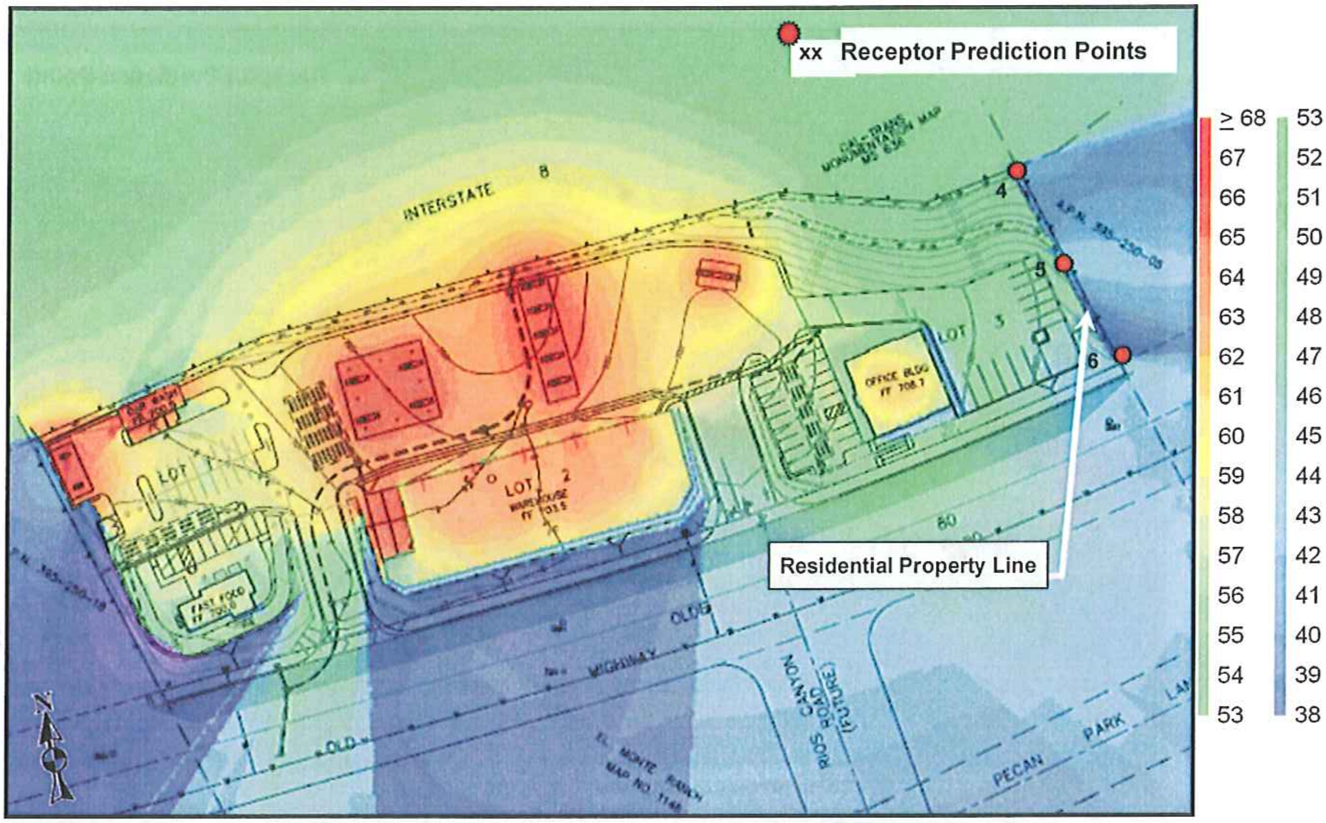

FIGURE 8b: Worst Case Noise Exposure Plot for Northeast Property Line Conditions (ISE, 1/07)

Should you have any questions regarding the above conclusions, please do not hesitate to contact me at (858) 451-3505.

Sincerely,

Rick Tavares

Rick Tavares, Ph.D.
Project Principal
Investigative Science and Engineering, Inc.

Cc: André Estrada– EIT

Attachments: IS3 Model Input / Output Data

IS3 Model Data

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Black Gold (TPM 20974) West Property Line
8 = start x point in feet
23 = start y point in feet
903 = end x point in feet
636 = end y point in feet
33 = number of source points
500 = dominant frequency of source in Hz
3 = reference distance in feet
2 = distance between steps
115 = number of barrier pairs
-8 = receptor elevation in feet
SOURCE POINTS IN FEET (XYZ - LEVEL in dBA)
101,328,15,83
132,341,15,77
269,354,17,81
277,325,17,81
310,365,17,81
318,336,17,81
401,426,18,81
407,408,18,81
412,390,18,81
417,371,17.5,81
422,353,17.5,81
541,433,16.5,81
663,357,20,75
683,671,20,75
671,338,20,75
691,346,20,75
153,180,26,75
178,191,26,75
286,255,17,78
292,232,17,78
305,235,17,78
298,259,17,78
349,244,18,77
389,255,18,77
429,266,18,77
468,277,18,77
319,275,18,77
358,284,18,77
397,295,18,77
435,306,18,77
474,317,18,77
49,297,16,81
59,274,16,81
BARRIER SOURCE PAIRS IN FEET (START XY - END XY - HEIGHT - STC)
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176,177,177,173,23,0
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100,304,94,319,23,0
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507,331,523,273,34,0
523,273,513,254,34,0
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306,196,294,203,34,0
294,203,290,217,34,0
290,217,314,224,34,0
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364,291,387,298,34,0
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279,231,282,224,7,0
282,224,284,216,6,0
284,216,287,206,5,0
287,206,289,200,5,0
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515,242,533,263,10,0
533,263,520,308,10,0
END OF INPUT FILE - REV 3.1
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BLACK GOLD (TPM 20974) East Property Line
8 = START X POINT IN FEET
23 = START Y POINT IN FEET
903 = END X POINT IN FEET
636 = END Y POINT IN FEET
33 = NUMBER OF SOURCE POINTS
500 = DOMINANT FREQUENCY OF SOURCE IN HZ
3 = REFERENCE DISTANCE IN FEET
2 = DISTANCE BETWEEN STEPS
115 = NUMBER OF BARRIER PAIRS
40 = RECEPTOR ELEVATION IN FEET
SOURCE POINTS IN FEET (XYZ - LEVEL IN DBA)
101,328,15,83
132,341,15,77
269,354,17,81
277,325,17,81
310,365,17,81
318,336,17,81
401,426,18,81
407,408,18,81
412,390,18,81
417,371,17.5,81
422,353,17.5,81
541,433,16.5,81
663,357,20,75
683,671,20,75
671,338,20,75
691,346,20,75
153,180,26,75
178,191,26,75
286,255,17,78
292,232,17,78
305,235,17,78
298,259,17,78
349,244,18,77
389,255,18,77
429,266,18,77
468,277,18,77
319,275,18,77
358,284,18,77
397,295,18,77
435,306,18,77
474,317,18,77
49,297,16,81
59,274,16,81
BARRIER SOURCE PAIRS IN FEET (START XY - END XY - HEIGHT - STC)
144,163,176,177,23,0
176,177,177,173,23,0
177,173,195,181,23,0
195,181,190,191,23,0
190,191,194,193,23,0
194,193,187,211,23,0
187,211,151,195,23,0
151,195,153,191,23,0
153,191,135,183,23,0
135,183,144,163,23,0
661,309,719,334,30,0
719,334,695,392,30,0
695,392,637,367,30,0
637,367,661,309,30,0
90,327,88,332,23,0
88,332,133,352,23,0
133,352,135,348,23,0
139,339,141,335,23,0
141,335,133,332,23,0
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133,332,137,321,23,0
137,321,100,304,23,0
100,304,94,319,23,0
479,324,507,331,34,0
507,331,523,273,34,0
523,273,513,254,34,0
513,254,306,196,34,0
306,196,294,203,34,0
294,203,290,217,34,0
290,217,314,224,34,0
314,224,300,273,34,0
300,273,310,276,34,0
325,280,348,287,34,0
364,291,387,298,34,0
402,302,425,308,34,0
441,313,464,319,34,0
763,514,765,508,65,0
765,508,769,500,65,0
769,500,771,497,60,0
771,497,772,494,59,0
772,494,774,491,58,0
774,491,775,489,57,0
775,489,777,485,56,0
777,485,778,483,55,0
778,483,779,481,54,0
779,481,781,478,53,0
781,478,782,476,52,0
782,476,783,474,51,0
783,474,785,470,50,0
785,470,787,467,49,0
787,467,788,464,48,0
788,464,790,461,47,0
790,461,792,458,45,0
792,458,794,456,44,0
794,456,796,453,43,0
796,453,787,449,42,0
787,449,798,446,41,0
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801,439,804,434,39,0
804,434,806,431,38,0
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807,428,810,424,36,0
810,424,814,415,35,0
814,415,819,406,33,0
819,406,823,397,31,0
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828,388,831,383,27,0
831,383,834,378,25,0
834,378,837,373,24,0
837,373,838,371,23,0
838,371,838,370,22,0
838,370,839,368,21,0
29,311,32,306,5,0
32,306,55,255,10,0
55,255,59,257,0,0
59,257,83,221,0,0
83,221,109,164,3,0
109,164,143,143,6,0
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156,146,190,162,7,0
190,162,215,176,7,0
215,176,233,194,6,0
233,194,219,238,6,0
59,257,68,261,5,0
68,261,76,249,5,0
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76,249,83,221,2,0
274,249,276,240,9,0
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284,216,287,206,5,0
287,206,289,200,5,0
289,200,307,190,5,0
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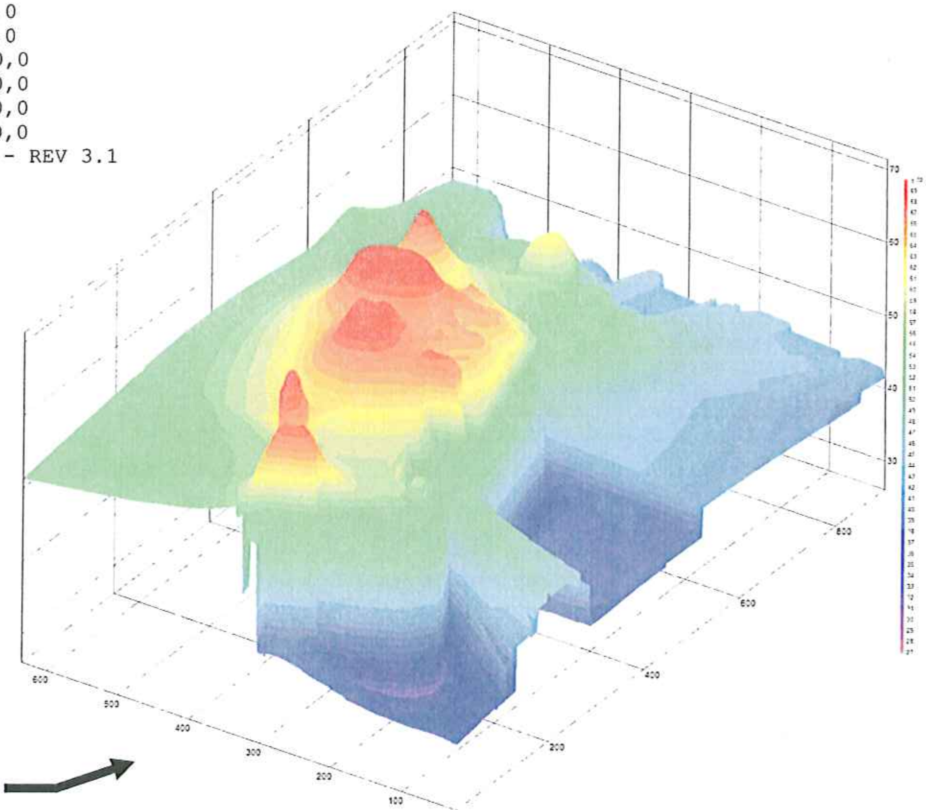

OUTPUT PLOT