



The July 14, 2006 Ninyo & Moore Hazardous Materials Technical Study and July 26, 2006, AEI Consultants Phase II Subsurface Investigation were used as the basis for the hazardous materials evaluation included in the EIR for the current Harbor Island Hotel Project (4-story, 175 room hotel located east of the existing Sunroad Resort Marina building). ICF Jones & Stokes did not conduct any updates to information contained in the reports for purposes of completing the EIR.

The Project in the 2006 reports was the originally proposed project (600-room hotel complex encompassing all of East Harbor Island). The Port District and ICF Jones & Stokes determined that the Ninyo & Moore and AEI Consultants reports are still appropriate and adequate assessments of the current Project site because the Project site evaluated in the EIR is located within the limits of the area evaluated in the 2006 reports.

July 26, 2006

**PHASE II  
SUBSURFACE INVESTIGATION**

955 Harbor Island Drive  
San Diego, California 92101

AEI Project Number 29319

Prepared For

Northmarq Capital  
500 Newport Center Drive, Suite 650  
Newport Beach, California 92660

And

ING Life Insurance and Annuity Company, A Connecticut Corporation  
C/O ING Investment Management LLC  
5780 Powers Ferry Road, Suite 300  
Atlanta, GA 30327-4390  
Attn: Jason Tessler

Prepared By

**AEI CONSULTANTS**  
2447 Pacific Coast Highway, Suite 101  
Hermosa Beach, California 90254  
(310) 798-4255

**AEI**



Wednesday, July 26, 2006

Mr. Ory Schwartz  
Northmarq Capital  
500 Newport Center Drive, Suite 650  
Newport Beach, California 92660

**Subject: Phase II Subsurface Investigation**  
955 Harbor Island Drive  
San Diego, California 92101  
AEI Project Number 29319

Dear Mr. Schwartz:

The following letter report describes the activities and results of the Phase II Subsurface Investigation (Phase II) conducted by AEI Consultants (AEI) at the above-referenced property. The purpose of the investigation was to determine if the former waste oil underground storage tank (UST) was removed or still in place and whether or not it impacted the subsurface. Authorization to conduct the investigation and prepare this Report was given by Northmarq Capital through a signed copy of AEI Proposal Number 2006-4402A.

## **I Property Description**

The subject property is located on the north side of Harbor Island Drive in a commercial and area of San Diego. The property totals approximately 5.95 acres and is improved with four buildings and two parking lots. The main building is 9,000 square feet and consists of eight tenants, one vacancy, a health club, an electric storage room, restrooms and the Marina Office. The second and third buildings are identical in design and in usage. Both buildings are 5,400 square feet and are utilized as restroom/locker buildings for use by boat owners. The fourth building is the pool building that is 1,962 square feet and is used to store various pool chemicals, two sand filters, janitorial cleaning items, a hot water heater, and other electrical equipment.

Other features on the subject property include a swimming pool and Jacuzzi, 610 boat slips, and a 610-space asphalt parking lot located on the east and west ends of the subject property. The Landscaping is located throughout the property, along the street and the front perimeters of the buildings. Landscaping consists of plants, shrubs, grass, flowers, and mature trees. Please refer to Figure 1 for a site vicinity map and to Figure 2 for a site plan.

## **II Project History**

According to a Phase I Environmental Assessment (Phase I) Report prepared by Professional Service Industries, Inc. (PSI) in May 2006, the subject property is developed with a resort facility and marina. An environmental database for the subject property identified the property as having a UST. The SWEEPS database listing identified a 500-gallon UST containing petroleum,

while the San Diego County Hazardous Materials Management Division (SD HMMD) database listing showed a 5,000-gallon UST located at the subject property. PSI spoke with the subject property manager, Mr. Scott MacLaggen, who noted that a 500-gallon waste oil UST was formerly located on the west end of the property under what is presently a dumpster area. He was not aware of any other USTs having been located on-site, specifically the petroleum and/or 5,000-gallon USTs identified in the environmental databases. The waste oil UST was formerly used for disposal of used motor oil from the marina. Based on the lack of UST abandonment documentation, the Phase I concluded that the former waste oil UST represents a recognized environmental condition (REC).

To address the REC identified during the May 2006 Phase I, AEI conducted a Phase II Subsurface Investigation.

### **III Investigative Scope**

The scope of the Phase II included a geophysical survey and one boring (AEI-B1) advanced in the vicinity of the former UST.

#### *Site-Specific Health and Safety Plan*

A site-specific Health and Safety Plan was reviewed and signed by all persons involved with the investigation prior to the commencement of any drilling activities conducted at the subject property. Please see Appendix A for a copy of the signed Health and Safety Plan.

#### *Geophysical Survey*

The Geophysical Survey was conducted at 955 Harbor Island Drive on July 21, 2006. The approach included integrating EM-61 metal detection and ground-penetrating radar (GPR). A sampling grid of north-south traverses spaced 5 feet apart was established with data collected at 2.5-foot intervals. The data was processed on-site and used to generate contour maps to assist in identifying the location of anomalies typical of USTs and/or former tankholds.

#### *Geophysical Survey Results*

The geophysical investigation yielded evidence of disturbed/backfilled soil appearing ovular in shape, approximately 20 feet by 15 feet located in the northwestern portion of the property. Although the findings were not conclusive, the shape and magnitude of this subsurface anomaly are consistent with former tankholds. Please see Figure 3 for a map indicating the geophysical survey area and the location of the subsurface anomaly.

### Permit Acquisition

Prior to any fieldwork, AEI obtained a permit from the County of San Diego, Department of Environmental Health. AEI received approval on July 19, 2006 through permit # LMON104133. A copy of the permit application is included in Appendix B.

### Drilling Equipment and Duration of Subsurface Investigation

All borings were advanced with a direct-push, truck-mounted Model 6600 Geoprobe rig on July 21, 2006. All casings, rods, and sampling equipment were decontaminated between boreholes to prevent cross-contamination.

### Soil Boring/Sampling Locations

Boring AEI-B1 was advanced in the northwest portion of the subject property at the former tankhold. Please see Figure 3 for a map indicating boring locations.

### Soil Sampling Depths

Boring AEI-B1 was advanced to a terminal depth of 15 feet below ground surface (bgs) with soil samples collected at 2, 5, 10, and 15 feet bgs.

Each borehole was backfilled with hydrated bentonite chips and capped with asphalt upon completion of soil sampling.

### Soil Sampling Methods

Soil samples were collected in acetate tubes using the Geoprobe rig. Each sample was examined for lithological classification and field-screened with a photoionization detector (PID) and by visual and olfactory means. Please see Appendix C for boring log from this investigation.

Samples were collected from the acetate tubes via Environmental Protection Agency (EPA) Method 5035 protocol using disposable plastic syringes and 40-milliliter (mL) volatile organics analysis (VOA) containers with sodium bisulfate (NaHSO<sub>4</sub>) preservative. Following EPA Method 5035 sample collection, the acetate tubes were sealed on both ends with Teflon tape and plastic caps. All soil samples were labeled for identification and stored in an iced cooler.

### Groundwater Sampling Depths

Groundwater was encountered in boring AEI-B1 at the terminal depth of 15 feet bgs.

Groundwater Sampling Methods

Groundwater samples were collected using the Geoprobe rig by advancing a Hydropunch® equipped with a 4-foot screen to groundwater. The Hydropunch® was opened to allow groundwater to fill the screen. A sterile ¼-inch diameter polyethylene tube with a check valve was inserted into the Hydropunch® and used to collect groundwater samples. Groundwater samples were poured into a laboratory-supplied sterile 1-liter amber glass jar and five laboratory-supplied sterile 40-milliliter VOA containers and capped with no observed headspace or air bubbles in the vials. Each sample was labeled for identification and immediately stored in an iced cooler.

Groundwater samples were obtained from boring AEI-B1 with the Hydropunch® advanced to 19 feet bgs and pulled back to 15 feet bgs.

Laboratory Analysis

A total of four soil samples and one groundwater sample were collected on July 21, 2006. The samples were transported under proper chain-of-custody protocol to Advanced Technology Laboratories (ATL), a state-certified laboratory [Environmental Laboratory Accreditation Program (ELAP) Number 1838] in the City of Signal Hill, California, for analysis on July 21, 2006. Based on field screening results, one soil and one groundwater sample were analyzed for carbon chain total petroleum hydrocarbons (TPH-cc) via EPA Method 8015M and for volatile organic compounds (VOCs) via EPA Method 8260B.

Please see Table 1, shown on the next page, for a summary of the borings and sampling schedule.

*Table 1: Boring Locations and Sampling Schedule*

Boring Identification	Location	Terminal Depth (feet bgs)	Matrix	Depth Sampled* (feet bgs)	Target Contaminants
AEI-B1	Northwest corner of property Adjacent to former tankhold	15	Soil	2, 5, 10, 15	TPH-cc, VOCs
			Ground-water	15	TPH-cc, VOCs

Notes:

\*Depths in bold laboratory analyzed for carbon chain total petroleum hydrocarbons (TPH-cc) via EPA Method 8015M and for volatile organic compounds (VOCs) via EPA Method 8260B

bgs = below ground surface

TPH-cc = carbon chain total petroleum hydrocarbons

VOCs = volatile organic compounds

#### **IV Lithology and Hydrogeology**

According to information obtained from the U.S Geological Survey (USGS), the area surrounding the subject property is located on artificial fill underlain by soils of the Bay Point Formation, which consists of marine muds that are poorly consolidated.

Based on a review of the USGS Point Loma Quadrangle Topographic Map, the subject property is situated 8 feet above mean sea level, and the local topography is sloping to the north. The nearest surface water is the East Basin, located approximately 0.02 miles north of the subject property. Based on topographic map interpretation, there is no inferred flow direction of groundwater at the subject property due to the fact that it is surrounded by water on three sides.

According to the United States Department of Agriculture Soil Survey for San Diego Area, the subject property is underlain by soils of the Huerhuero-Stockpen Association. The Huerhuero-Stockpen Association are moderately well drained loams to gravelly clay loams that have a subsoil of clay or gravelly clay; 0 to 9 percent slopes. This association is made up of soils that developed on marine terraces in sandy to clayey marine sediments. It occurs on the Coastal Plains, where the elevation ranges from sea level to 400 feet. Huerhuero soils have a surface layer of brown loam and a subsoil of gray gravelly clay. Stockpen soils have a surface layer of light-gray gravelly clay loam and a subsoil of gray gravelly clay. Both soils overlie yellowish-brown loamy sand to olive gray clay. These soils are used for the truck crops, flowers, housing developments and range.

On-site soil borings indicate that the top 15 feet of soil generally consists of light brown medium grained sand. These soils were found to be generally loose, dry, with no discernable odor or discoloration. Please see Appendix C for boring log from this investigation.

Groundwater on-site was encountered at 15 feet bgs.

#### **V Results of Analytical Laboratory Tests**

ATL reported the results of the laboratory analyses on July 24, 2006. Please see Table 2 for a summary of the TPH-cc laboratory analysis results. Please see Table 3 for a summary of the VOC laboratory analysis results.

*Table 2: TPH-cc Laboratory Results*

Sample Identification	TPH-g	TPH-d	TPH-o
<b>AEI-B1-5' (mg/kg)</b>	ND	ND	ND
<b>AEI-B1-GW' (µg/L)</b>	ND	ND	ND

**Notes:**

TPH-cc = carbon chain total petroleum hydrocarbons  
 mg/kg = milligrams per kilogram  
 µg/L = micrograms per liter  
 TPH-g = total petroleum hydrocarbons as gasoline  
 TPH-d = total petroleum hydrocarbons as diesel  
 TPH-o = total petroleum hydrocarbons as oil  
 ND = not detected above laboratory reporting limits (refer to laboratory report for detection limits)

*Table 3: VOC Laboratory Results*

Sample Identification	All VOCs
<b>AEI-B1-5' (µg/kg)</b>	ND
<b>AEI-B1-GW' (µg/L)</b>	ND

**Notes:**

VOCs = volatile organic compounds  
 µg/kg = micrograms per kilogram  
 ND = not detected above laboratory reporting limits (refer to laboratory report for detection limits)

Please see Appendix D for a copy of all analytical results and chain-of-custody documentation for this investigation.

**VI Discussion**

All analyzed samples had non-detectable concentrations of TPH-cc and all VOCs.

**VII Conclusions**

During this investigation, AEI advanced one soil boring in the vicinity of the former UST. One soil and one groundwater sample were analyzed for TPH-cc and VOCs. Groundwater was encountered at 15 feet bgs. None of the analyzed samples had detectable concentrations of TPH-cc or any VOCs.

No evidence of a significant release from the former UST was detected during this investigation. AEI recommends no further investigation at this time.

## **VIII Report Limitations**

This report presents a summary of work completed by AEI, and has been prepared for Northmarq Capital as it pertains to the property located at 955 Harbor Island Drive in the City of San Diego, California. Neither this report, nor any of the information contained herein shall be used or relied upon by any other person or entity other than Northmarq Capital or ING Life Insurance and Annuity Company.

The completed work includes observations and descriptions of site conditions encountered. Where appropriate, the report includes analytical results for samples taken during the course of the work. All conclusions and/or recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

The number and location of samples were chosen to provide the required information, but it cannot be assumed that they are representative of areas not sampled. The variations that may exist between sampling points cannot be anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing.

This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the subject property. Undocumented, unauthorized releases of hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

All specified work has been performed in accordance with generally accepted practices in geotechnical environmental engineering, engineering geology, and hydrogeology. No other warranty, either expressed or implied, is made.

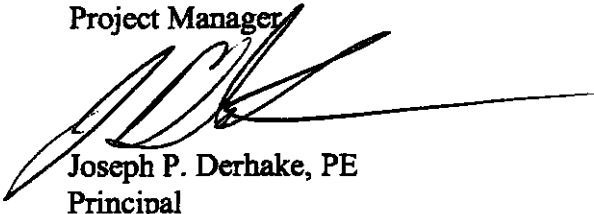
If you have any questions regarding this investigation, please do not hesitate to contact the undersigned at (310) 798-4255.

Sincerely,

**AEI CONSULTANTS**



Brett Anderson, EIT  
Project Manager



Joseph P. Derhake, PE  
Principal

- Figures:
1. Site Vicinity Map
  2. Site Plan
  3. Boring Location

- Appendices:
- A. Health and Safety Plan
  - B. Permit
  - C. Boring Logs
  - D. Laboratory Results



## **Figures**

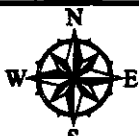


USGS TOPOGRAPHIC MAP  
 POINT LOMA QUADRANGLE  
 Created 1967, Revised 1994

<b>AEI CONSULTANTS</b>	
2447 Pacific Coast Highway, Suite 101, Hermosa Beach, CA	
<b>SITE LOCATION MAP</b>	
955 Harbor Island Drive San Diego, California 92101	<b>FIGURE 1</b> Job No: 29319



**SCALE**



**LEGEND**

-  Subject Property
-  Building
-  Marina
-  Parking
-  Right Of Way
-  Roads

**AEI CONSULTANTS**

2447 Pacific Coast Highway, Suite 101, Hermosa Beach, CA

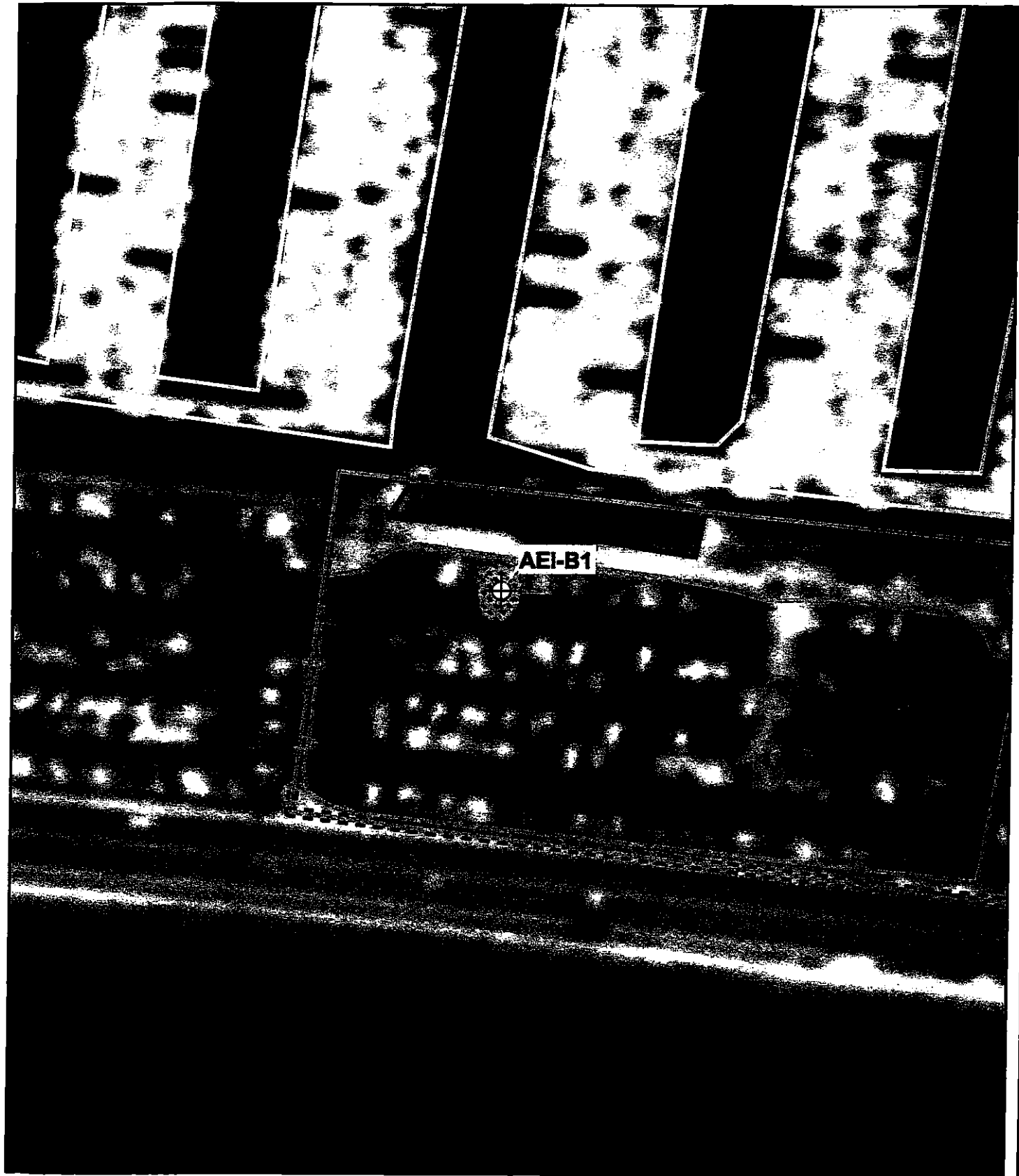
July 2006

Drawn By: B. Anderson

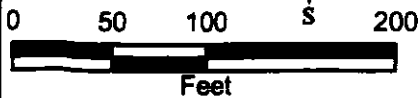
**SITE PLAN**

955 Harbor Island Drive  
San Diego, CA 92101







**FIGURE 2**  
Job No: 29319



**SCALE**



**LEGEND**

-  Boring
-  Former UST
-  Subject Property
-  Parking
-  Building
-  Marina

**AEI CONSUTLANTS**

2447 Pacific Coast Highway, Suite 101, Hermosa Beach, CA

July 2006

Drawn By: B. Anderson

**BORING LOCATION**

955 Harbor Island Drive  
San Diego, CA 92101

**FIGURE 3**  
Job No: 29319

**Appendix A:**  
**Health and Safety Plan**

# **HEALTH AND SAFETY PLAN**

**Prepared for:**

**Phase II Subsurface Investigation**

**at**

**955 Harbor Island Drive  
San Diego, California 92101**

**A. INTRODUCTION**

This Health and Safety Plan is written for the Phase III Subsurface Investigation being conducted at 955 Harbor Island Drive in San Diego, California. All job site personnel will follow CAL OSHA safe operating practices as outlined in 29 CFR 1910 and 1926, as well as established guidelines set forth by AEI or their respective companies.

**B. WORK DESCRIPTION**

Site Manager: Brett Anderson  
310-798-4255

Project Safety Manager: Joseph Derhake  
310-798-4255

Address: 955 Harbor Island Drive  
San Diego, California 2101

All of the samples collected will be analyzed by a state certified laboratory, and the entire project will be performed under the responsible charge of a registered professional civil engineer.

**C. SITE/WASTE CHARACTERISTICS**

Hazard Level: Serious:  
Low: XXX  
Moderate:  
Unknown:

Waste Type: Solid: XXX  
Sludge:  
Liquid:  
Gas: XXX

Hazard Characteristics: Toxic

## D. HAZARD EVALUATION

Potential hazards include skin and eye contact or inhalation exposure to potentially toxic concentrations of hazardous chemicals. The potential toxic compounds that may exist at the site are listed below with descriptions of specific health effects of each. The list includes the primary potential toxic constituents that may be found at sites previously handling petroleum hydrocarbons.

### 1. Benzene

- a. Colorless to light yellow, flammable liquid with an aromatic odor.
- b. Toxic hazard by **inhalation, adsorption, ingestion and skin and/or eye contact**.
- c. Exposure may irritate eyes, nose and respiratory system and may cause acute restlessness, convulsions, nausea, or depression. Benzene is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eight hour period is 1.0 ppm.

### 2. Toluene

- a. Colorless liquid with a sweet, pungent, benzene like odor.
- b. Toxic hazard by **inhalation, adsorption, ingestion and skin and/or eye contact**.
- c. Exposure may cause fatigue, weakness, confusion, euphoria, dizziness, headaches, dilated pupils, lacrimation, nervousness, insomnia, paresthesia, and dermatitis.
- d. Permissible exposure level for a time-weighted average over an eight-hour period is 100 ppm.

### 3. Xylene

- a. Colorless liquid with an aromatic odor.
- b. Toxic hazard by **inhalation, adsorption, ingestion and skin and/or eye contact**.
- c. Exposure may irritate eyes nose and throat and may cause dizziness, excitement, drowsiness, incoordination, corneal vacuolization, anorexia, nausea, vomiting, and dermatitis.
- d. Permissible exposure level for a time-weighted average over an eight-hour period is 100 ppm.

### 4. Ethylbenzene

- a. Colorless liquid with an aromatic odor.
- b. Toxic hazard by **inhalation, ingestion, and skin and/or eye contact**. Ethylbenzene is carcinogenic.\*
- c. Exposure may irritate eyes and mucous membrane and may cause headaches, dermatitis, narcosis and loss of consciousness.
- d. Permissible exposure level for a time-weighted average over an eight-hour period is 100 ppm.

#### 5. Lead

- a. A heavy ductile soft gray metal.
- b. Toxic hazard by **inhalation, ingestion, and skin and/or eye contact**.
- c. Exposure may cause weakness, nausea, lassitude, diarrhea, insomnia, anorexia, inflamed mucous membranes and abdominal pains. Lead is carcinogenic.\*
- d. Permissible exposure level for a time-weighted average over an eight-hour period is 0.05 ppb (in vapor).

#### 6. Gasoline

- a. Colorless liquid with a strong aromatic odor. Highly volatile and extremely flammable.
- b. Toxic hazard by **inhalation, adsorption, ingestion and skin and/or eye contact**.
- c. Inhalation of vapors can cause depression of the central nervous system with symptoms such as headache, dizziness, nausea and loss of coordination. Skin contact can cause defatting of the skin, skin irritation and dermatitis. Benzene is a major constituent of gasoline.
- d. Permissible exposure level for a time-weighted average over an eight-hour period is 300 ppm.

#### 7. MTBE

- a. Colorless liquids with aromatic odor
- b. Toxic hazard by **inhalation, absorption, ingestion and skin and/or eye contact**.
- c. Exposure may irritate eyes, nose and respiratory system and may cause acute restlessness, convulsions, nausea, or depression. MTBE is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eight hour period is 1.0 ppm.

All of the chemical hazards discussed above are primarily inhalation hazards. Work exposure will be monitored by the air-monitoring program, as discussed in Section F.

\* **Known to the State of California to cause cancer.**

## **E. PERSONAL PROTECTIVE CLOTHING**

Based on evaluation of potential hazards, level "D" protective clothing has been designated as the appropriate protection for this project. The level of protective clothing will be upgraded if the organic vapor levels in the operator's breathing zone exceed 5 ppm above background levels continuously for more than five minutes, or if any single reading exceeds 25 ppm. If this occurs then level C protection will be used. If the organic concentration in the operator's breathing zone exceeds 200 ppm for 5 minutes and/or the organic vapor concentration two feet above the excavation exceeds 1,000 ppm or 10% of the lower explosive limit, then the equipment will be shut down and the site evacuated. If organic vapor concentrations exceed 200 ppm and work continues then level B protection will be required.

"EPA Standard Operating Safety Guidelines" defines the levels of protective clothing as follows:

### **LEVEL A:**

Fully encapsulating suit / SCBA / Hard hat / Steel toe boots / Safety gloves.

### **LEVEL B:**

Splash resistant suit / SCBA / Hard Hat / Steel toe boots / Safety gloves.

### **LEVEL C:**

Half face respirator / Hard hat / Safety glasses / Steel toe boots / Coveralls / Gloves.

### **LEVEL D:**

Coveralls / Hardhat / Safety Glasses / Steel toe boots / Gloves.

If air-purifying respirators are authorized, organic vapor w-filter is the appropriate canister for use with the involved substances and concentrations. A competent individual has determined that all criteria for using this type of respiratory protection have been met.

**NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE COMPANY SAFETY OFFICER, J.P. DERHAKE.**

**A FIRST AID KIT AND A 40 POUND BC FIRE EXTINGUISHER WILL BE AVAILABLE ON SITE.**

**EMERGENCY SERVICES ARE AVAILABLE BY DIALING 911 ON THE TELEPHONE LOCATED IN THE SITE MANAGER'S VEHICLE. THIS VEHICLE WILL BE ON SITE AT ALL TIMES.**

## **F. MONITORING INSTRUMENTS**

A photoionization detector will be used to monitor ambient air contaminant concentration. The photoionization detector will be calibrated prior to the start of on-site activities by trained personnel. Readings will be taken at the discretion of the Site Manager based on on-site observations.

## **G. WORKER SAFETY**

There will be a 3-foot boundary surrounding the work area. The area within this boundary is considered an exclusion zone and only qualified personnel will be allowed to enter. All personnel arriving or departing the site should log in before entering the exclusion zone. All activities on site must be cleared through the Site Manager. Brett Anderson has been designated to coordinate access control and security on site. Joseph Derhake is the designated Project Safety Officer. All work will strictly follow OSHA guidelines. In the event of an emergency, the Site Manager must be notified. All emergency activities will be coordinated through the Project Safety Manager and local emergency personnel. Any injury must be promptly reported to arrange proper medical care.

## **H. EMERGENCY INSTRUCTIONS**

In the event of an emergency, all on-site activities shall cease. If practical, all on-site equipment shall be shut down. All personnel are required to immediately report to the site manager for instructions. If complete site evacuation is necessary, all personnel shall meet at the reconnoiter spot, identified as the **SIDEWALK AT THE INTERSECTION OF HARBOR ISLAND DRIVE AND HARBOR ISLAND DRIVE**. If necessary, local authorities and medical response agencies shall be notified. Work will commence again at the discretion of the Project Safety Manager and/or local authorities.

## I. EMERGENCY HOSPITAL

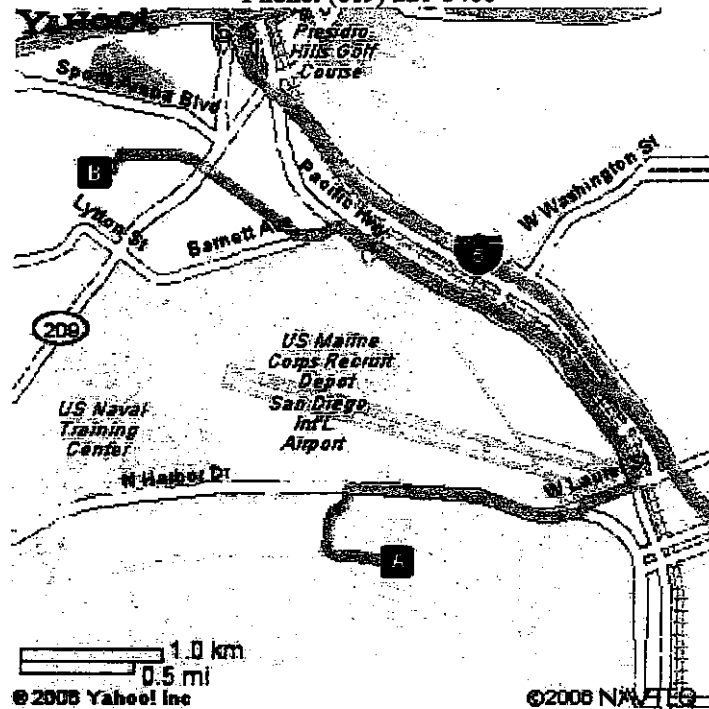
The closest hospital with an emergency room is:

### SHARP MEMORIAL HOSPITAL

3475 KENYON ST

SAN DIEGO, CA

Phone: (619) 221-3400



### Directions

1. Start at 955 HARBOR ISLAND DR, SAN DIEGO - go 0.6 mi
2. Turn **R** on N HARBOR DR - go 1.0 mi
3. Turn **L** on W LAUREL ST - go 0.3 mi
4. Turn **L** on PACIFIC HWY - go 0.8 mi
5. Take **L** ramp onto PACIFIC HWY - go 1.0 mi
6. Take **L** ramp onto BARNETT AVE - go 0.2 mi
7. Turn **R** on MIDWAY DR - go 0.9 mi
8. Turn **L** on WING ST - go 0.1 mi
9. Turn **R** on KENYON ST - go 0.1 mi
10. Arrive at SHARP MEMORIAL HOSPITAL

Show Turn by Turn Maps

**J. READ AND SIGN**

The work party was briefed on the contents of this plan on 7/21/06 at 12:30. All site personnel have read the above plan and are familiar with its provisions.

NAME:

SIGNATURE:

COMPANY NAME:

Brett Anderson

Brett Anderson

AEJ

Jimmy [Signature]

GOUANAY AIFARO

K/E

## **Appendix B:**

### **Permits**



PERMIT #LMON104133  
A.P.N. # 760-010-23-00  
EST # 124680/139558


COUNTY OF SAN DIEGO  
DEPARTMENT OF ENVIRONMENTAL HEALTH  
LAND AND WATER QUALITY DIVISION  
MONITORING WELL PROGRAM  
SOIL BORING CONSTRUCTION PERMIT

SITE NAME: SUNROAD RESORT AND MARINA  
SITE ADDRESS: 955 HARBOR ISLAND DR., SAN DIEGO, CA 92101  
PERMIT FOR: ONE SOIL BORING  
PERMIT APPROVAL DATE: JULY 19, 2006  
PERMIT EXPIRES ON: NOVEMBER 16, 2006  
RESPONSIBLE PARTY: SUNROAD RESORT AND MARINA

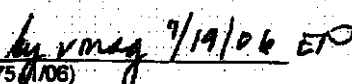
**PERMIT CONDITIONS:**

1. All borings must be sealed from the bottom of the boring to the ground surface with an approved sealing material as specified in California Well Standards Bulletin 74-90, Part III, Section 19.D. **Drill cuttings are not an acceptable fill material.**
2. All borings must be properly destroyed within 24 hours of drilling.
3. Placement of any sealing material at a depth greater than 30 feet must be done using the tremie method.
4. All water and soil resulting from the activities covered by this permit must be managed, stored and disposed of as specified in the SAM Manual in Section 5, II, E- 4. ([http://www.sdcountry.ca.gov/deh/lwq/sam/manual\\_guidelines.html](http://www.sdcountry.ca.gov/deh/lwq/sam/manual_guidelines.html)). In addition, drill cuttings must be properly handled and disposed in compliance with the Stormwater Best Management Practices of the local jurisdiction.
5. Within 60 days of completing work, submit a well construction report, including all well and/or boring logs and laboratory data to the Well Permit Desk. This report must include all items required by the SAM Manual, Section 5, Pages 6 & 7.
6. This office must be given 48-hour notice of any drilling activity on this site and advanced notification of drilling cancellation. Please contact the Well Permit Desk at (619) 338-2339.

APPROVED BY:

  
ERNIE L. PROFETA

DATE: 07/19/2006

NOTIFIED:  7/19/06 ETO  
DEH: SAM-9075/106



Resubmitted  
Rec'd 7/12/06

**PERMIT APPLICATION  
GROUNDWATER  
AND VADOSE MONITORING WELLS  
AND EXPLORATORY OR TEST BORINGS**

<b>OFFICE USE ONLY</b>	
PERMIT LMON #	104133
SAM CASE Y/N #	124680/139 ST1
DATE RECEIVED:	7-12-06
FEE PAID:	\$185.00
CHECK #	3784

RECEIVED  
2006 JUL 12 AM 9 50

RECEIVED  
2006 JUL 6

**A. RESPONSIBLE PARTY** Sunroad Resort and Marina  
 (The person, persons, or company responsible for the construction, maintenance, and destruction of the proposed borings and/or wells.)  
 Mailing Address 955 Harbor Drive City San Diego State CA Zip 92101-  
 Contact Person Scott MacLaggan Phone (619) 574-0736 Ext. Fax  
 B. L. H. MAIL ROOM Phone (619) 574-0736 x  
 619-574-7603

**B. SITE ASSESSMENT PROJECT NUMBER - IF APPLICABLE** # 29319

**C. CONSULTING FIRM** AEI Consultants  
 Mailing Address 2447 Pacific Coast Highway, Suite 101 City Hermosa Beach State CA Zip 90254-  
 Registered Professional Joseph Derhake Registration # C055476 (RCE)  
 Contact Person Brett Anderson Phone 310-798-4255 Ext. 241 Fax 798-2841

**D. DRILLING COMPANY** Kehoe Testing & Engineering C57# 786163  
 Contact Name Steve Kehoe  
 Mailing Address 15571 Industry Lane City Huntington Beach State CA Zip 92649-  
 Phone 714-901-7270 Fax 714-901-7289

**E. CONSTRUCTION INFORMATION**

TYPE OF WELLS/ BORINGS TO BE CONSTRUCTED	MATERIALS TO BE USED		PROPOSED CONSTRUCTION
	CASING	SEAL/BORING BACKFILL	
# <input type="checkbox"/> Groundwater <input type="checkbox"/> Vadose <input checked="" type="checkbox"/> Boring <input type="checkbox"/> Other	Not Applicable Type Steel Gauge 0.01 Diameter 1.75" Well Screen Size 4' Filter Pack None	<input type="checkbox"/> Neat Cement <input type="checkbox"/> Cement & Bentonite <input type="checkbox"/> Sand-Cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other Borehole diameter 2"	Estimated groundwater depth: 10 ft. Estimated depth of boring 15 ft. Concrete 0 to 3 surface seal Annular seal to Bentonite 3 to 15 transition seal Filter Pack to Perforation to
<b>NUMBER OF WELLS TO BE DESTROYED</b> <input type="checkbox"/>	<b>Drilling Method</b> <input type="checkbox"/> Auger <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Percussion <input type="checkbox"/> Air Rotary <input checked="" type="checkbox"/> Other		<b>NOTE:</b> Attach a well construction diagram for wells with multiple completions

I agree to comply with the requirements of the current Site Assessment and Mitigation Manual, and with all ordinances and laws of the County of San Diego and the State of California pertaining to well/boring construction and destruction.

**DRILLER'S SIGNATURE** Steve Kehoe **DATE** 07/02/06

Within 60 days of completion, I will furnish the Monitoring Well Permit Desk with a complete and accurate well/boring log. I will certify the design and construction or destruction of the well/borings in accordance with the permit application.

PG/RCE SIGNATURE



DATE

6/23/04

**F. SITE INFORMATION**

1. ASSESSOR'S PARCEL NUMBER 76001023

# 24680

Site Name Sunroad Resort and Marina

Site Address 955 Island Harbor Drive (Harbor Island Dr) City San Diego

Zip 92101-

PROPERTY OWNER Scott MacLaggan

Phone (619) 574-0736

Ext

Fax 949-729-4620

Mailing Address 955 Island Harbor Drive (Harbor Island Dr) City San Diego

State CA

Zip 92101-

NUMBER OF WELLS 0

TYPE OF WELLS NA

2. ASSESSOR'S PARCEL NUMBER \_\_\_\_\_

Site Name \_\_\_\_\_

Site Address \_\_\_\_\_

City \_\_\_\_\_

Zip \_\_\_\_\_

PROPERTY OWNER \_\_\_\_\_

Phone \_\_\_\_\_

Ext. \_\_\_\_\_

Fax \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

NUMBER OF WELLS \_\_\_\_\_

TYPE OF WELLS \_\_\_\_\_

3. ASSESSOR'S PARCEL NUMBER \_\_\_\_\_

Site Name \_\_\_\_\_

Site Address \_\_\_\_\_

City \_\_\_\_\_

Zip \_\_\_\_\_

PROPERTY OWNER \_\_\_\_\_

Phone \_\_\_\_\_

Ext. \_\_\_\_\_

Fax \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

NUMBER OF WELLS \_\_\_\_\_

TYPE OF WELLS \_\_\_\_\_

**4. ASSESSOR'S PARCEL NUMBER \_\_\_\_\_**

Site Name \_\_\_\_\_  
 Site Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_

**PROPERTY OWNER \_\_\_\_\_**

Phone \_\_\_\_\_  
 Mailing Address \_\_\_\_\_

Ext. \_\_\_\_\_ City \_\_\_\_\_ Fax \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**NUMBER OF WELLS: \_\_\_\_\_**

**TYPE OF WELLS \_\_\_\_\_**

**Permit Fees In Effect for July 1, 2005 - June 30, 2006**

**G. FEES (in effect beginning July 1, 2005, through June 30, 2006)**

The County Board of Supervisors authorized a 10% credit, for the Fiscal Year ending June 30, 2006, to be applied to the Department of Environmental Health customers. This credit is being provided to qualified fee-based programs that have contributed to the cost reduction/cost containment/cost avoidance efforts initiated by the Department. This fee adjustment, for the Fiscal Year ending June 30, 2006, is applicable to fees and permits due and/or obtained during this period. The 10% is not applicable to enforcement fees or fees relating to non-compliance of permit regulations.

ACTIVITY	FEE SCHEDULE FEE - ONE-TIME FISCAL YEAR 10% CREDIT	AMOUNT
Permit for Well Installations Only (Groundwater Monitoring Wells, Vadose, Vapor Extraction Wells)	\$185.00 for the first monitoring well \$185.00 - 10% <\$18.50> =	1 x \$166.50 \$ _____
Permit for Well Maintenance Inspection (Valid for three years)	\$100.00 for first well maintenance inspection \$100.00 - 10% <\$10.00> =	1 x \$ 90.00 \$ _____
Each Additional New Well	\$160.00 for each additional well installation \$160.00 - 10% <\$16.00> =  \$ 30.00 for each additional well maintenance inspection \$ 30.00 - 10% <\$ 3.00> =	_____ x \$144.00 \$ _____  _____ x \$ 27.00 \$ _____

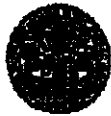
Permit for Borings Only (GPI's, Hydrograph, Geophysics, Temporary Well Points, etc.)	\$185.00 for the first boring \$185.00 - 10% <\$18.50> = \$166.50 for each additional boring \$120.00 - 10% <\$12.00> =	_____ x \$166.50 \$ _____ _____ x \$108.00 \$ _____
Permit for Well Destructions Only	\$185.00 for the first destruction \$185.00 - 10% <\$18.50> = \$120.00 for each additional destruction \$120.00 - 10% <\$12.00> =	<u>  1  </u> x \$166.50 \$ _____ _____ x \$108.00 \$ _____
Permit for any Combination of Well Installations, Borings, & Destructions (except for Backfill Permit) Permit for any Combination of Well Installations, Borings, & Destructions (except for Backfill permit)	The permit fee will be \$185.00 \$185.00 - 10% <\$18.50> = Additional activities will be as follows: \$185.00 for each additional well \$185.00 - 10% <\$18.50> = \$100.00 for first well maintenance inspection \$100.00 - 10% <\$10.00> = \$50.00 for each additional well maintenance inspection \$50.00 - 10% <\$5.00> = \$120.00 for each additional boring \$120.00 - 10% <\$12.00> = \$120.00 for each well destruction \$120.00 - 10% <\$12.00> =	<u>  1  </u> x \$166.50 \$ _____ _____ x \$144.00 \$ _____ <u>  1  </u> x \$ 90.00 \$ _____ _____ x \$ 27.00 \$ _____ _____ x \$ 45.00 \$ _____ _____ x \$108.00 \$ _____
	<b>TOTAL COST OF PERMIT</b>	<u>  1  </u> x \$166.50 \$ _____ <u>  1  </u> x \$108.00 \$ _____ <u>  1  </u> x \$ 90.00 \$ _____ <u>  1  </u> x \$ 27.00 \$ _____ <u>  1  </u> x \$ 45.00 \$ _____ <u>  1  </u> x \$108.00 \$ _____ <b>\$466.50</b>
Permit for Underground Storage Tank Monitoring System in Backfill (i.e. Enhanced Leak Detection)	(Flat Fee) \$320.00 - 10% <\$32.00> =	<b>\$288.00</b>

**H. QUESTIONNAIRE: Please answer all applicable questions completely. For well destructions, complete only #1 below and submit any required supportive documentation.**

1. If wells are to be destroyed, provide a description of method of destruction NA
2. What is the purpose of the well/boring investigation?
  - a. Part of an ongoing site assessment case in which DEH or another government regulator is the lead agency.
  - b. Part of a Phase I investigation for property ownership transfer or: Phase II Investigation
  - c. Geotechnical investigation for proposed construction, land stabilization or:
  - d. Other: \_\_\_\_\_
3. What procedures will be used to prevent the well/boring from providing an avenue to contamination during construction? Drilling will be conducted using a direct push rig. The borehole will be backfilled using hydrated bentonite chips.
4. What field procedures will be utilized to determine if contamination exists? oil samples will be screened using a photoionization detector (PID) as well as visual and olfactory means.
5. What procedures will be used to determine whether samples will be sent for laboratory testing or archiving? Soil samples will be analyzed based upon the results of the field screening (PID, visual and olfactory).
6. What constituents will be monitored and tested (Include EPA Laboratory Test Methods to be used)? TPH-cc via EPA Method 8015M and for VOCs via EPA Method 8260B.
7. How will samples be transported and preserved? Soil samples will be transported under proper chain-of-custody protocol in a cooler with ice maintained at 4 degrees Celcius. VOC samples will be stored in 40-mL vials preserved with Sodium Bisulfate.
8. What sampling methods will be used? Samples will be collected from the acetate tubes via Environmental Protection Agency (EPA) Method 5035 protocol using disposable plastic syringes and 40-milliliter (mL) volatile organics analysis (VOA) containers with sodium bisulfate (NaHSO<sub>4</sub>) preservative. Following EPA Method 5035 sample collection, the acetate tubes will be sealed on both ends with Teflon tape and plastic caps. All soil samples will be labeled for identification.
9. Are you proposing a variation from the methods and/or procedures presented in the requirements for the construction or destruction of Vadose and Groundwater Monitoring Wells (Current SAM Manual Requirements)? If yes, specify these variations and include a well construction diagram and all required supporting documentation. Refer to the SAM Manual Appendix B for monitoring well guidelines ([http://www/sdcounty.ca.gov/deh/hwq/sam/monitoring\\_well.html](http://www/sdcounty.ca.gov/deh/hwq/sam/monitoring_well.html)). :NA
10. Are you proposing a variation in drilling and destruction of soil borings from the methods and/or procedures specified in the current SAM manual? If yes, specify these variations and include a destruction diagram. No
11. What procedures will be used to ensure that the drilling equipment will introduce no contamination? All casings and rods will be decontaminated before operating on-site and between boreholes.

12. What methods will be used to clean sampling equipment? Casings and rods will be decontaminated using a triple-rinse cycle using a non-phosphate detergent.

13. What cleaning method will be used to clean casing and screen prior to installation? NA



# County of San Diego

GARY W. ERBECK  
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
LAND AND WATER QUALITY DIVISION  
P.O. BOX 128261, SAN DIEGO, CA 92112-0261  
619-338-2222/FAX 619-338-2312/1-800-283-3833  
www.sdcounty.ca.gov/dehq/ehq

DAN De LAURENTO  
ASSISTANT DIRECTOR

## PROPERTY OWNER RESPONSIBILITY ACKNOWLEDGEMENT

Proposed locations for subsurface work:  
Property Address:

Assessor's Parcel Number (APN):

955 Harbor Island A  
San Diego, CA 92101

76001023

I, \_\_\_\_\_ owner of the property/properties listed above, give my permission to AEI Consultants (consulting company, contractor) to conduct the following work at the locations stated above.

Install \_\_\_\_\_ monitoring wells       Destroy \_\_\_\_\_ monitoring wells       Drill 1 soil borings

The person who causes to have a monitoring well installed or an existing well destroyed on this property is defined as the Responsible Party. San Diego County Code, Section 67.424, states that: "Monitoring wells shall be maintained to meet construction or destruction standards. If a monitoring well does not meet construction or destruction standards, the Responsible Party must repair, reconstruct or destroy the monitoring well so it meets the standards. The property owner, if different than the Responsible Party, must take the necessary actions to repair, reconstruct or destroy the monitoring well so it meets the standards if the Responsible Party does not complete the necessary actions."

A soil boring is used specifically to sample soil and, because there are construction and destruction standards, is included in the definition of a monitoring well even though no maintenance is required. These standards are outlined in the County of San Diego Site Assessment and Mitigation (SAM) Manual and the State of California Well Standards Bulletin 74-90.

I understand that Joe Nerlake (registered professional) of AEI Consultants (consulting company) and an authorized signer for Kelsoe Testing (drilling company) have submitted a signed application to the Department of Environmental Health in which they have agreed to complete the above-stated work according to the requirements of the current SAM Manual, all ordinances and laws of the County of San Diego and the State of California pertaining to well/boring construction and destruction.

I also understand that if either the registered professional and/or the licensed drilling company should fail in their responsibilities as defined in San Diego County Code, Section 67.424, I, as the property owner, must take the necessary actions to repair, reconstruct or destroy the monitoring well so it meets the standards if the Responsible Party does not complete the necessary actions.

The scope of work covered by this Acknowledgement will expire one year from the date of the property owner's signature below. If an extension of time beyond one year is required to complete the proposed drilling activities or additional work is proposed, a new Property Owner Responsibility Agreement will be required.

Property Owner Signature: Paul Fanfara Date: 7/14/06

Print Name: PAUL FANFARA Title: SENIOR DIRECTOR

Company: SAN DIEGO UNIFIED PORT DISTRICT

Mailing Address: P.O. Box 120488, San Diego, CA 92112-0488



# County of San Diego

GARY W. ERZECK  
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
LAND AND WATER QUALITY DIVISION  
P.O. BOX 129281, SAN DIEGO, CA 92112-9281  
619-388-2222/FAX 619-688-2311/1-800-293-9983  
www.sdcounty.ca.gov/doh/lwq

DAN De LAURENTIS  
ASSISTANT DIRECTOR

## PROPERTY OWNER RESPONSIBILITY ACKNOWLEDGEMENT

Proposed locations for subsurface work:

Property Address:

Assessor's Parcel Number (APN):

955 Harbor Island Dr  
San Diego, CA 92101

76001023

I, Scott MacLaggan, owner of the property/properties listed above, give my permission to AEI Consultants (consulting company, contractor) to conduct the following work at the locations stated above.

Install \_\_\_\_\_ monitoring wells       Destroy \_\_\_\_\_ monitoring wells       Drill 1 soil borings

The person who causes to have a monitoring well installed or an existing well destroyed on this property is defined as the *Responsible Party*. San Diego County Code, Section 87.424, states that: "Monitoring wells shall be maintained to meet construction or destruction standards. If a monitoring well does not meet construction or destruction standards, the *Responsible Party* must repair, reconstruct or destroy the monitoring well so it meets the standards. The property owner, if different than the *Responsible Party*, must take the necessary actions to repair, reconstruct or destroy the monitoring well so it meets the standards if the *Responsible Party* does not complete the necessary actions."

A soil boring is used specifically to sample soil and, because there are construction and destruction standards, is included in the definition of a monitoring well even though no maintenance is required. These standards are outlined in the County of San Diego Site Assessment and Mitigation (SAM) Manual and the State of California Well Standards Bulletin 74-90.

I understand that Joe DeHate (registered professional) of AEI Consultants (consulting company) and an authorized signer for Rehae Testing (drilling company) have submitted a signed application to the Department of Environmental Health in which they have agreed to complete the above-stated work according the requirements of the current SAM Manual, all ordinances and laws of the County of San Diego and the State of California pertaining to well/boring construction and destruction.

I also understand that if either the registered professional and/or the licensed drilling company should fail in their responsibilities as defined in San Diego County Code, Section 87.424, I, as the property owner, must take the necessary actions to repair, reconstruct or destroy the monitoring well so it meets the standards if the *Responsible Party* does not complete the necessary actions.

The scope of work covered by this Acknowledgement will expire one year from the date of the property owner's signature below. If an extension of time beyond one year is required to complete the proposed drilling activities or additional work is proposed, a new Property Owner Responsibility Agreement will be required.

Property Owner Signature: [Signature]

Date: July 11, 2006

Print Name: Scott MacLaggan

Title: \_\_\_\_\_

Company: Sunroad Resort and Marina

Mailing Address: 955 Harbor Island Drive, San Diego, CA 92101

## **Appendix C:**

### **Boring Logs**



AEI Consultants  
 2447 Pacific Coast Hwy, Suite 101  
 Hermosa Beach, CA 90254  
 Telephone: (310) 798-4255  
 Fax: (310) 798-2841

**BORING NUMBER AEI-B1**

PROJECT NUMBER/NAME 955 Harbor Island Drive 29319

PROJECT ADDRESS 955 Harbor Island Drive, San Diego CLIENT Northmarq Capital

DRILLING DATE 7/21/06 TOTAL DEPTH 15 Feet GROUND ELEVATION \_\_\_\_\_

CONTRACTOR Kehoe Testing and Engineering, Inc. ∇ DEPTH TO FIRST GROUNDWATER: 15.0 ft ∇ DEPTH TO STATIC GROUNDWATER: 15.0 ft

METHOD Direct-push, Truck-mounted Geoprobe 6600 - Acetate / 5035

LOGGED BY B. Anderson CHECKED BY J. Derhake NOTES Backfilled with hydrated bentonite chips, asphalt capped

BORING LOCATION Northwest Corner of Property

DEPTH (ft)	SAMPLE TYPE NUMBER	PID (ppm)	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	NOTES
0					Concrete at surface	
	AEI-B1-2	0	SP	⊗	Dry, Light Brown, medium grained SAND, poorly graded	
5	AEI-B1-5	0	SP	⊗	Dry, Light Brown, medium grained SAND, poorly graded	
10	AEI-B1-10	0	SP	⊗	Dry, Light Brown, medium grained SAND, poorly graded	
15	AEI-B1-15	0	SP	⊗	▼ Dry, Light Brown, medium grained SAND, poorly graded	
	AEI-B1-GW				Bottom of hole at 15.0 feet.	

AEI 4.5-08 29319 BORING LOGS.GPJ GINT US.GDT 7/26/06

**Appendix D:**  
**Laboratory Results**

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**CLIENT:** AEI Consultants  
**Project:** 955 Harbor Island Drive, 29319  
**Lab Order:** 085696

**CASE NARRATIVE**

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EPA 8260 analysis was performed using 5035 preservation requirements. Any high level dilutions were performed on a preserved methanol sample unless otherwise noted.



# Advanced Technology Laboratories

Date: 25-Jul-06

<b>CLIENT:</b>	AEI Consultants	<b>Client Sample ID:</b>	AEI-B1-5
<b>Lab Order:</b>	085696	<b>Tag Number:</b>	
<b>Project:</b>	955 Harbor Island Drive, 29319	<b>Collection Date:</b>	7/21/2006 12:40:00 PM
<b>Lab ID:</b>	085696-002A	<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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## VOLATILE ORGANIC COMPOUNDS BY GC/MS

### EPA 8260B

RunID: MS3_060724A	QC Batch: R06VS147	PrepDate: 7/24/2006	Analyst: TT		
1,1,1,2-Tetrachloroethane	ND	5.7	µg/Kg	1	7/24/2006
1,1,1-Trichloroethane	ND	5.7	µg/Kg	1	7/24/2006
1,1,2,2-Tetrachloroethane	ND	5.7	µg/Kg	1	7/24/2006
1,1,2-Trichloroethane	ND	5.7	µg/Kg	1	7/24/2006
1,1-Dichloroethane	ND	5.7	µg/Kg	1	7/24/2006
1,1-Dichloroethene	ND	5.7	µg/Kg	1	7/24/2006
1,1-Dichloropropene	ND	5.7	µg/Kg	1	7/24/2006
1,2,3-Trichlorobenzene	ND	5.7	µg/Kg	1	7/24/2006
1,2,3-Trichloropropane	ND	5.7	µg/Kg	1	7/24/2006
1,2,4-Trichlorobenzene	ND	5.7	µg/Kg	1	7/24/2006
1,2,4-Trimethylbenzene	ND	5.7	µg/Kg	1	7/24/2006
1,2-Dibromo-3-chloropropane	ND	11	µg/Kg	1	7/24/2006
1,2-Dibromoethane	ND	5.7	µg/Kg	1	7/24/2006
1,2-Dichlorobenzene	ND	5.7	µg/Kg	1	7/24/2006
1,2-Dichloroethane	ND	5.7	µg/Kg	1	7/24/2006
1,2-Dichloropropane	ND	5.7	µg/Kg	1	7/24/2006
1,3,5-Trimethylbenzene	ND	5.7	µg/Kg	1	7/24/2006
1,3-Dichlorobenzene	ND	5.7	µg/Kg	1	7/24/2006
1,3-Dichloropropane	ND	5.7	µg/Kg	1	7/24/2006
1,4-Dichlorobenzene	ND	5.7	µg/Kg	1	7/24/2006
2,2-Dichloropropane	ND	5.7	µg/Kg	1	7/24/2006
2-Chlorotoluene	ND	5.7	µg/Kg	1	7/24/2006
4-Chlorotoluene	ND	5.7	µg/Kg	1	7/24/2006
4-Isopropyltoluene	ND	5.7	µg/Kg	1	7/24/2006
Benzene	ND	5.7	µg/Kg	1	7/24/2006
Bromobenzene	ND	5.7	µg/Kg	1	7/24/2006
Bromodichloromethane	ND	5.7	µg/Kg	1	7/24/2006
Bromoform	ND	5.7	µg/Kg	1	7/24/2006
Bromomethane	ND	5.7	µg/Kg	1	7/24/2006
Carbon tetrachloride	ND	5.7	µg/Kg	1	7/24/2006
Chlorobenzene	ND	5.7	µg/Kg	1	7/24/2006
Chloroethane	ND	5.7	µg/Kg	1	7/24/2006
Chloroform	ND	5.7	µg/Kg	1	7/24/2006
Chloromethane	ND	5.7	µg/Kg	1	7/24/2006
cis-1,2-Dichloroethene	ND	5.7	µg/Kg	1	7/24/2006
cis-1,3-Dichloropropene	ND	5.7	µg/Kg	1	7/24/2006

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



# Advanced Technology Laboratories

Date: 25-Jul-06

<b>CLIENT:</b>	AEI Consultants	<b>Client Sample ID:</b>	AEI-B1-5
<b>Lab Order:</b>	085696	<b>Tag Number:</b>	
<b>Project:</b>	955 Harbor Island Drive, 29319	<b>Collection Date:</b>	7/21/2006 12:40:00 PM
<b>Lab ID:</b>	085696-002A	<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

### EPA 8260B

RunID: MS3_060724A	QC Batch: R06VS147	PrepDate: 7/24/2006	Analyst: TT		
Dibromochloromethane	ND	5.7	µg/Kg	1	7/24/2006
Dibromomethane	ND	5.7	µg/Kg	1	7/24/2006
Dichlorodifluoromethane	ND	5.7	µg/Kg	1	7/24/2006
Ethylbenzene	ND	5.7	µg/Kg	1	7/24/2006
Hexachlorobutadiene	ND	5.7	µg/Kg	1	7/24/2006
Isopropylbenzene	ND	5.7	µg/Kg	1	7/24/2006
m,p-Xylene	ND	11	µg/Kg	1	7/24/2006
Methylene chloride	ND	5.7	µg/Kg	1	7/24/2006
n-Butylbenzene	ND	5.7	µg/Kg	1	7/24/2006
n-Propylbenzene	ND	5.7	µg/Kg	1	7/24/2006
Naphthalene	ND	5.7	µg/Kg	1	7/24/2006
o-Xylene	ND	5.7	µg/Kg	1	7/24/2006
sec-Butylbenzene	ND	5.7	µg/Kg	1	7/24/2006
Styrene	ND	5.7	µg/Kg	1	7/24/2006
tert-Butylbenzene	ND	5.7	µg/Kg	1	7/24/2006
Tetrachloroethene	ND	5.7	µg/Kg	1	7/24/2006
Toluene	ND	5.7	µg/Kg	1	7/24/2006
trans-1,2-Dichloroethene	ND	5.7	µg/Kg	1	7/24/2006
Trichloroethene	ND	5.7	µg/Kg	1	7/24/2006
Trichlorofluoromethane	ND	5.7	µg/Kg	1	7/24/2006
Vinyl chloride	ND	5.7	µg/Kg	1	7/24/2006

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



**Advanced Technology Laboratories**

Date: 25-Jul-06

<b>CLIENT:</b>	AEI Consultants	<b>Client Sample ID:</b>	AEI-B1-5
<b>Lab Order:</b>	085696	<b>Tag Number:</b>	
<b>Project:</b>	955 Harbor Island Drive, 29319	<b>Collection Date:</b>	7/21/2006 12:40:00 PM
<b>Lab ID:</b>	085696-002D	<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**HYDROCARBON CHAIN IDENTIFICATION**

LUFT

EPA 8015B(M)

RunID: GC8_060724A	QC Batch: 29336	PrepDate: 7/24/2006	Analyst: CBR		
T/R Hydrocarbons: C8-C10	ND	10	mg/Kg	1	7/24/2006
T/R Hydrocarbons: C10-C18	ND	10	mg/Kg	1	7/24/2006
T/R Hydrocarbons: C18-C28	ND	10	mg/Kg	1	7/24/2006
T/R Hydrocarbons: C28-C36	ND	10	mg/Kg	1	7/24/2006
T/R Hydrocarbons: C36-C40	ND	10	mg/Kg	1	7/24/2006
T/R Hydrocarbons: C8-C40 Total	ND	10	mg/Kg	1	7/24/2006

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



**Advanced Technology Laboratories**

Date: 25-Jul-06

<b>CLIENT:</b> AEI Consultants	<b>Client Sample ID:</b> AEI-B1-GW
<b>Lab Order:</b> 085696	<b>Tag Number:</b>
<b>Project:</b> 955 Harbor Island Drive, 29319	<b>Collection Date:</b> 7/21/2006 12:55:00 PM
<b>Lab ID:</b> 085696-005A	<b>Matrix:</b> GROUND WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID: MS2_060724A	QC Batch: Q06VW126	PrepDate:	Analyst: HH
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L 1 7/24/2006
1,1,1-Trichloroethane	ND	5.0	µg/L 1 7/24/2006
1,1,2,2-Tetrachloroethane	ND	5.0	µg/L 1 7/24/2006
1,1,2-Trichloroethane	ND	5.0	µg/L 1 7/24/2006
1,1-Dichloroethane	ND	5.0	µg/L 1 7/24/2006
1,1-Dichloroethene	ND	5.0	µg/L 1 7/24/2006
1,1-Dichloropropene	ND	5.0	µg/L 1 7/24/2006
1,2,3-Trichlorobenzene	ND	5.0	µg/L 1 7/24/2006
1,2,3-Trichloropropane	ND	5.0	µg/L 1 7/24/2006
1,2,4-Trichlorobenzene	ND	5.0	µg/L 1 7/24/2006
1,2,4-Trimethylbenzene	ND	5.0	µg/L 1 7/24/2006
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L 1 7/24/2006
1,2-Dibromoethane	ND	5.0	µg/L 1 7/24/2006
1,2-Dichlorobenzene	ND	5.0	µg/L 1 7/24/2006
1,2-Dichloroethane	ND	5.0	µg/L 1 7/24/2006
1,2-Dichloropropane	ND	5.0	µg/L 1 7/24/2006
1,3,5-Trimethylbenzene	ND	5.0	µg/L 1 7/24/2006
1,3-Dichlorobenzene	ND	5.0	µg/L 1 7/24/2006
1,3-Dichloropropane	ND	5.0	µg/L 1 7/24/2006
1,4-Dichlorobenzene	ND	5.0	µg/L 1 7/24/2006
2,2-Dichloropropane	ND	5.0	µg/L 1 7/24/2006
2-Chlorotoluene	ND	5.0	µg/L 1 7/24/2006
4-Chlorotoluene	ND	5.0	µg/L 1 7/24/2006
4-Isopropyltoluene	ND	5.0	µg/L 1 7/24/2006
Benzene	ND	5.0	µg/L 1 7/24/2006
Bromobenzene	ND	5.0	µg/L 1 7/24/2006
Bromodichloromethane	ND	5.0	µg/L 1 7/24/2006
Bromoform	ND	5.0	µg/L 1 7/24/2006
Bromomethane	ND	5.0	µg/L 1 7/24/2006
Carbon tetrachloride	ND	5.0	µg/L 1 7/24/2006
Chlorobenzene	ND	5.0	µg/L 1 7/24/2006
Chloroethane	ND	5.0	µg/L 1 7/24/2006
Chloroform	ND	5.0	µg/L 1 7/24/2006
Chloromethane	ND	5.0	µg/L 1 7/24/2006
cis-1,2-Dichloroethene	ND	5.0	µg/L 1 7/24/2006
Dibromochloromethane	ND	5.0	µg/L 1 7/24/2006

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



# Advanced Technology Laboratories

Date: 25-Jul-06

<b>CLIENT:</b>	AEI Consultants	<b>Client Sample ID:</b>	AEI-B1-GW
<b>Lab Order:</b>	085696	<b>Tag Number:</b>	
<b>Project:</b>	955 Harbor Island Drive, 29319	<b>Collection Date:</b>	7/21/2006 12:55:00 PM
<b>Lab ID:</b>	085696-005A	<b>Matrix:</b>	GROUND WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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## VOLATILE ORGANIC COMPOUNDS BY GC/MS

### EPA 8260B

RunID: MS2_060724A	QC Batch: Q08VW126	PrepDate:	Analyst: HH		
Dibromomethane	ND	5.0	µg/L	1	7/24/2006
Dichlorodifluoromethane	ND	5.0	µg/L	1	7/24/2006
Ethylbenzene	ND	5.0	µg/L	1	7/24/2006
Hexachlorobutadiene	ND	5.0	µg/L	1	7/24/2006
Isopropylbenzene	ND	5.0	µg/L	1	7/24/2006
m,p-Xylene	ND	10	µg/L	1	7/24/2006
Methylene chloride	ND	5.0	µg/L	1	7/24/2006
n-Butylbenzene	ND	5.0	µg/L	1	7/24/2006
n-Propylbenzene	ND	5.0	µg/L	1	7/24/2006
Naphthalene	ND	5.0	µg/L	1	7/24/2006
o-Xylene	ND	5.0	µg/L	1	7/24/2006
sec-Butylbenzene	ND	5.0	µg/L	1	7/24/2006
Styrene	ND	5.0	µg/L	1	7/24/2006
tert-Butylbenzene	ND	5.0	µg/L	1	7/24/2006
Tetrachloroethene	ND	5.0	µg/L	1	7/24/2006
Toluene	ND	5.0	µg/L	1	7/24/2006
trans-1,2-Dichloroethene	ND	5.0	µg/L	1	7/24/2006
Trichloroethene	ND	5.0	µg/L	1	7/24/2006
Trichlorofluoromethane	ND	5.0	µg/L	1	7/24/2006
Vinyl chloride	ND	5.0	µg/L	1	7/24/2006

<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



# Advanced Technology Laboratories

Date: 25-Jul-06

<b>CLIENT:</b> AEI Consultants	<b>Client Sample ID:</b> AEI-B1-GW
<b>Lab Order:</b> 085696	<b>Tag Number:</b>
<b>Project:</b> 955 Harbor Island Drive, 29319	<b>Collection Date:</b> 7/21/2006 12:55:00 PM
<b>Lab ID:</b> 085696-005B	<b>Matrix:</b> GROUND WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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## HYDROCARBON CHAIN IDENTIFICATION

### EPA 3510C

### EPA 8015B(M)

RunID: GC7_BACK_060724A	QC Batch: 29337	PrepDate: 7/24/2006	Analyst: CBR		
T/R Hydrocarbons: C8-C10	ND	0.20	mg/L	1	7/24/2006
T/R Hydrocarbons: C10-C18	ND	0.20	mg/L	1	7/24/2006
T/R Hydrocarbons: C18-C28	ND	0.20	mg/L	1	7/24/2006
T/R Hydrocarbons: C28-C36	ND	0.20	mg/L	1	7/24/2006
T/R Hydrocarbons: C36-C40	ND	0.20	mg/L	1	7/24/2006
T/R Hydrocarbons: C8-C40 Total	ND	0.20	mg/L	1	7/24/2006

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



CLIENT: AEI Consultants  
 Work Order: 085696

Project: 955 Harbor Island Drive, 29319

**ANALYTICAL QC SUMMARY REPORT**

TestCode: 8260\_S\_5035

Sample ID: R0724061CS1    SampType: LCS    TestCode: 8260\_S\_5035    Units: µg/Kg    Prep Date:    RunNo: 65820  
 Client ID: LCSS    Batch ID: R06VS147    TestNo: EPA 8260B    Analysis Date: 7/24/2006    SeqNo: 977975

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	102.530	5.0	100.0	0	103	79	127				
Benzene	101.980	5.0	100.0	0	102	85	122				
Chlorobenzene	96.070	5.0	100.0	0	96.1	81	129				
Toluene	99.940	5.0	100.0	0	99.9	83	122				
Trichloroethene	99.500	5.0	100.0	0	99.5	84	128				

Sample ID: R072406B2MS    SampType: MS    TestCode: 8260\_S\_5035    Units: µg/Kg    Prep Date:    RunNo: 65820  
 Client ID: ZZZZZ    Batch ID: R06VS147    TestNo: EPA 8260B    Analysis Date: 7/24/2006    SeqNo: 977976

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	106.220	5.0	100.0	0	106	54	146				
Benzene	102.370	5.0	100.0	0	102	57	144				
Chlorobenzene	99.360	5.0	100.0	0	99.4	51	153				
Toluene	101.320	5.0	100.0	0	101	54	144				
Trichloroethene	101.770	5.0	100.0	0	102	55	151				

Sample ID: R072406B2MSD    SampType: MSD    TestCode: 8260\_S\_5035    Units: µg/Kg    Prep Date:    RunNo: 65820  
 Client ID: ZZZZZ    Batch ID: R06VS147    TestNo: EPA 8260B    Analysis Date: 7/24/2006    SeqNo: 977977

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	102.050	5.0	100.0	0	102	54	146	106.2	4.00	30	
Benzene	97.600	5.0	100.0	0	97.6	57	144	102.4	4.77	30	
Chlorobenzene	97.230	5.0	100.0	0	97.2	51	153	99.36	2.17	30	
Toluene	96.590	5.0	100.0	0	96.6	54	144	101.3	4.78	30	
Trichloroethene	99.630	5.0	100.0	0	99.6	55	151	101.8	2.13	30	

**Qualifiers:**

- E Value above quantitation range
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

CLIENT: AEI Consultants  
 Work Order: 085696  
 Project: 955 Harbor Island Drive, 29319

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S\_5035

Sample ID: R072406MB2    SampType: MBLK    TestCode: 8260\_S\_5035    Units: µg/Kg    Prep Date:    RunNo: 65820  
 Client ID: PBS    Batch ID: R06VS147    TestNo: EPA 8260B    Analysis Date: 7/24/2006    SeqNo: 977978

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropane	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	10									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									

Qualifiers:  
 E Value above quantitation range  
 R RPD outside accepted recovery limits  
 Calculations are based on raw values

H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out

CLIENT: AEI Consultants  
 Work Order: 085696  
 Project: 955 Harbor Island Drive, 29319

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S\_5035

Sample ID: R072406MB2    SampType: MBLK    TestCode: 8260\_s\_5035    Units: µg/Kg    Prep Date:    RunNo: 85820  
 Client ID: PBS    Batch ID: R06VS147    TestNo: EPA 8260B    Analysis Date: 7/24/2006    SeqNo: 977978

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	5.0									
Chloroethane	ND	5.0									
Chloroform	ND	5.0									
Chloromethane	ND	5.0									
cis-1,2-Dichloroethene	ND	5.0									
cis-1,3-Dichloropropene	ND	5.0									
Dibromochloromethane	ND	5.0									
Dibromomethane	ND	5.0									
Dichlorodifluoromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Isopropylbenzene	ND	5.0									
m,p-Xylene	ND	10									
Methylene chloride	ND	5.0									
n-Butylbenzene	ND	5.0									
n-Propylbenzene	ND	5.0									
Naphthalene	ND	5.0									
o-Xylene	ND	5.0									
sec-Butylbenzene	ND	5.0									
Styrene	ND	5.0									
tert-Butylbenzene	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Trichlorofluoromethane	ND	5.0									
Vinyl chloride	ND	5.0									

**Qualifiers:**  
 E Value above quantitation range  
 R RPD outside accepted recovery limits  
 Calculations are based on raw values

H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out

CLIENT: AEI Consultants  
 Work Order: 085696  
 Project: 955 Harbor Island Drive, 29319

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP

Sample ID: Q072406LC1	SampType: LCS	TestCode: 8260_WP	Units: µg/L	Prep Date:	RunNo: 65613
Client ID: LCSW	Batch ID: Q06VW126	TestNo: EPA 8260B		Analysis Date: 7/24/2006	SeqNo: 977608

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.600	5.0	20.00	0	93.0	77	131				
Benzene	19.470	5.0	20.00	0	97.4	88	114				
Chlorobenzene	20.560	5.0	20.00	0	103	84	115				
Toluene	19.990	5.0	20.00	0	100	90	114				
Trichloroethene	18.980	5.0	20.00	0	94.9	82	120				

Sample ID: Q072406MB1MS	SampType: MS	TestCode: 8260_WP	Units: µg/L	Prep Date:	RunNo: 65613
Client ID: ZZZZZZ	Batch ID: Q06VW126	TestNo: EPA 8260B		Analysis Date: 7/24/2006	SeqNo: 977609

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.030	5.0	20.00	0	95.2	77	131				
Benzene	19.150	5.0	20.00	0	95.6	88	114				
Chlorobenzene	20.320	5.0	20.00	0	102	84	115				
Toluene	19.540	5.0	20.00	0	97.7	90	114				
Trichloroethene	18.930	5.0	20.00	0	94.6	82	120				

Sample ID: Q072406MB1MSD	SampType: MSD	TestCode: 8260_WP	Units: µg/L	Prep Date:	RunNo: 65613
Client ID: ZZZZZZ	Batch ID: Q06VW126	TestNo: EPA 8260B		Analysis Date: 7/24/2006	SeqNo: 977610

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.090	5.0	20.00	0	90.4	77	131	19.03	5.06	30	
Benzene	19.290	5.0	20.00	0	96.5	88	114	19.15	0.728	30	
Chlorobenzene	21.400	5.0	20.00	0	107	84	115	20.32	5.18	30	
Toluene	20.520	5.0	20.00	0	103	90	114	19.54	4.89	30	
Trichloroethene	19.450	5.0	20.00	0	97.3	82	120	18.93	2.71	30	

**Qualifiers:**

E Value above quantitation range  
 R RPD outside accepted recovery limits  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out  
 Calculations are based on raw values



CLIENT: AEI Consultants  
 Work Order: 085696  
 Project: 955 Harbor Island Drive, 29319

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP

Sample ID: Q072406MB1	Sample Type: MBLK	TestCode: 8260_WP	Units: µg/L	Prep Date:	RunNo: 65813						
Client ID: PBW	Batch ID: Q06VVW126	TestNo: EPA 8260B		Analysis Date: 7/24/2006	SeqNo: 977811						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	5.0									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									

**Qualifiers:**  
 E Value above quantitation range  
 R RPD outside accepted recovery limits  
 Calculations are based on raw values

H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out



CLIENT: AEI Consultants

Work Order: 085696

Project: 955 Harbor Island Drive, 29319

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP

Sample ID: Q072406MB1	SampType: MBLK	TestCode: 8260_WP	Units: µg/L	Prep Date:	RunNo: 68813							
Client ID: PBW	Batch ID: Q06VW126	TestNo: EPA 8260B		Analysis Date: 7/24/2006	SeqNo: 977811							
Analyte	Result	PQL	SPK value	SPK Ref Val	Units	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	5.0										
Chloroethane	ND	5.0										
Chloroform	ND	5.0										
Chloromethane	ND	5.0										
cis-1,2-Dichloroethene	ND	5.0										
cis-1,3-Dichloropropene	ND	5.0										
Dibromochloromethane	ND	5.0										
Dibromomethane	ND	5.0										
Dichlorodifluoromethane	ND	5.0										
Ethylbenzene	ND	5.0										
Hexachlorobutadiene	ND	5.0										
Isopropylbenzene	ND	5.0										
m,p-Xylene	ND	10										
Methylene chloride	ND	5.0										
n-Butylbenzene	ND	5.0										
n-Propylbenzene	ND	5.0										
Naphthalene	ND	5.0										
o-Xylene	ND	5.0										
sec-Butylbenzene	ND	5.0										
Styrene	ND	5.0										
tert-Butylbenzene	ND	5.0										
Tetrachloroethene	ND	5.0										
Toluene	ND	5.0										
trans-1,2-Dichloroethene	ND	5.0										
Trichloroethene	ND	5.0										
Trichlorofluoromethane	ND	5.0										
Vinyl chloride	ND	5.0										

**Qualifiers:**

- E Value above quantitation range
  - R RPD outside accepted recovery limits
- Calculations are based on raw values

H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out



CLIENT: ABI Consultants

Work Order: 085696

Project: 955 Harbor Island Drive, 29319

**ANALYTICAL QC SUMMARY REPORT**

TestCode: HC\_S\_ATL

Sample ID: MB-29336	Sample Type: MBLK	TestCode: HC_S_ATL	Units: mg/Kg	Prep Date: 7/24/2006	RunNo: 66925						
Client ID: PBS	Batch ID: 29336	TestNo: EPA 8015B(M LUFT		Analysis Date: 7/24/2006	SeqNo: 978186						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C8-C10	ND	10									
T/R Hydrocarbons: C10-C18	ND	10									
T/R Hydrocarbons: C18-C28	ND	10									
T/R Hydrocarbons: C28-C38	ND	10									
T/R Hydrocarbons: C38-C40	ND	10									
T/R Hydrocarbons: C8-C40 Total	ND	10									

**Qualifiers:**

- E Value above quantitation range
  - R RPD outside accepted recovery limits
  - H Holding times for preparation or analysis exceeded
  - S Spike/Surrogate outside of limits due to matrix interference
  - ND Not Detected at the Reporting Limit
  - DO Surrogate Diluted Out
- Calculations are based on raw values



**CLIENT:** AEI Consultants  
**Work Order:** 085696

**Project:** 955 Harbor Island Drive, 29319

# ANALYTICAL QC SUMMARY REPORT

**TestCode: HC\_W\_ATL**

Sample ID: MB-29337	SampType: MBLK	TestCode: HC_W_ATL	Units: mg/L
Client ID: PBW	Batch ID: 29337	Prep Date: 7/24/2006	RunNo: 65832
		Analysis Date: 7/24/2006	SeqNo: 978361

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C8-C10	ND	0.20									
T/R Hydrocarbons: C10-C18	ND	0.20									
T/R Hydrocarbons: C18-C28	ND	0.20									
T/R Hydrocarbons: C28-C36	ND	0.20									
T/R Hydrocarbons: C36-C40	ND	0.20									
T/R Hydrocarbons: C8-C40 Total	ND	0.20									

**Qualifiers:**

- E Value above quantitation range
  - R RPD outside accepted recovery limits
- Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

