SITE INVESTIGATION REPORT

GEOPHYSICAL SURVEY AND POTHOLING
SOUTH COAST 101 HOV LANE PROJECT
SANTA BARBARA COUNTY, CALIFORNIA

***PREPARED FOR*:**
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 5
50 HIGUERA STREET
SAN LUIS OBISPO, CALIFORNIA

***PREPARED BY*:**
GEOCON CONSULTANTS, INC.
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GEOCON PROJECT NO. S9525-06-04
CALTRANS EA 05-0N7001

APRIL 2011

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9525-06-04
April 27, 2011

Mr. James Tkach
Caltrans – District 5
50 Higuera Street
San Luis Obispo, CA 93401

Subject: SITE INVESTIGATION REPORT
GEOPHYSICAL SURVEY AND POTHOLING TO LOCATE POTENTIAL OIL WELLS AND SUSPECT UST
SOUTH COAST 101 HOV LANE PROJECT
SANTA BARBARA, CALIFORNIA
CONTRACT NO. 06A1580, TASK ORDER NO. 4, EA NO. 05-0N7001

Dear Mr. Tkach:

In accordance with California Department of Transportation (Caltrans) Contract No. 06A1580, Task Order Number 4, and Expense Authorization 05-0N7001, Geocon Consultants, Inc. has performed environmental engineering services at the South Coast 101 HOV Lane project location in Santa Barbara, California. The accompanying report summarizes the services performed, including a geophysical survey, potholing to uncover a suspected underground storage tank (UST), and collection and analysis of a water sample from the UST.

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Please contact us if there are any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

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SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Site Investigation Report for the South Coast 101 High Occupancy Vehicle (HOV) Lane project was prepared by Geocon Consultants, Inc. under California Department of Transportation (Caltrans) Contract No. 06A1580, Task Order Number 4 (TO-4), and Expense Authorization (EA) 05-0N7001.

1.1 Purpose

The primary objectives of the current investigation were to determine if 1) an underground storage tank (UST) is located at the Iron Oil Tank and Historical Service Station within Caltrans right-of-way (ROW), and 2) oil wells associated with the Summerland Oil Field are present at the project location. Previous investigations indentified a suspected UST at the location of a proposed soundwall along the unpaved northbound shoulder of United States Route 101 (US-101), adjacent to Lillie Avenue, as well as potential oil wells that may be present within the project area.

Geocon oversaw a geophysical survey at the project location and performed potholing to determine the existence of a UST. Caltrans will use investigative results for project scoping, and to inform project construction contractor(s) of identified and potential hazardous substance impacts within the project boundaries and for construction worker health and safety, material management, and soil/groundwater disposal option evaluation purposes.

1.2 Project Description

The purpose of the South Coast 101 HOV Lane Project is to reduce congestion on US-101 from the City of Carpinteria to the City of Santa Barbara. Planned highway improvements include widening the existing four-lane freeway to six lanes by adding an HOV lane in each direction. The proposed project currently includes three build alternatives and a no build alternative. Alternative 1 proposes to add the HOV lanes while balancing outside and inside (median) landscaping impacts. Alternative 2 proposes to add the HOV lanes while maximizing the amount of median planting within the project limits. Alternative 3 proposes to add the HOV lanes within the existing median with minor incidental outside widening. Each of the alternatives incorporate design options to include auxiliary lanes in short weave sections where warranted by design criteria and traffic study recommendations. US-101 HOV Lane Project Alternatives 1 through 3 are planned within existing State ROW. The project location is depicted on the Vicinity Map, Figure 1.

1.3 Background

We previously prepared an Initial Site Assessment (ISA) for the South Coast HOV Lane Project dated June 29, 2009, and an ISA Addendum, dated June 23, 2010. The ISA and ISA Addendum provided a summary of potential contaminated properties identified within the project area that may impact selection of design alternatives, temporary construction easements, and planned construction activities. We recommended additional site investigations within the Caltrans ROW near identified potentially contaminated properties prior to road widening and in areas with potential soil impacts from aerially deposited lead (ADL).

The ISA findings and conclusions pertaining to South Coast 101 HOV Lane Project included the following:

- The presence of 16 locations within the project area that require further evaluation for potential impact on the design and construction of planned US-101 improvements. The locations were ranked (medium and high risk) based on their potential to impact each of the project build alternatives.
- The project area is located within and near the Summerland Oil Field; numerous oil and gas wells are located in the near vicinity and possibly adjacent to or within the project ROW.
- The results of the site reconnaissance, historical and regulatory file research, and prior field investigations indicate the potential presence of abandoned USTs within the existing US-101 ROW.
- ADL at levels exceeding hazardous waste criteria have been identified in shallow soil in the unpaved shoulders and median within the existing US-101 ROW.
- Other potential identified environmental constraints include bridge and structure asbestos-containing building materials (barrier rail shims) and lead-containing paint, and yellow thermoplastic and paint striping.

Based on additional information provided by Caltrans, 4 of the 16 potential contaminated properties originally categorized in the ISA as medium risk were re evaluated to low risk status in the ISA Addendum. We provided revised recommendations for preliminary site investigations near the 12 potentially contaminated properties with medium and high risk impacts to the proposed South Coast 101 HOV Lane Project, which included the following properties:

- Former Shell Service Station, 1000 Coast Village Road, Montecito (ISA Map ID No. 1)
- Chevron Station, 1085 Coast Village Road, Montecito (ISA Map ID No. 5)
- Carpinteria Fire Station No. 2, 2375 Lillie Avenue, Montecito (ISA Map ID No. 10)
- Gallup and Stribling, 3450 Via Real, Carpinteria (ISA Map ID No. 11)
- S.B. Harley-Davidson, 3501-3508 Via Real, Carpinteria (ISA Map ID No. 12)
- Corvette Shop, 3651 Via Real, Carpinteria (ISA Map ID No. 13)

- McCormix Corporation, 3663 Via Real, Carpinteria (ISA Map ID 14)
- Sandyland Nursery, 3890 Via Real, Carpinteria (ISA Map ID No. 17)
- Ocean Breeze Int'l, 3910 Via Real, Carpinteria (ISA Map ID No. 18)
- Chevron Station 9-3005, 4290 Via Real, Carpinteria (ISA Map ID No. 19)
- Unocal Service Station, 4401 Via Real, Carpinteria (ISA Map ID No. 21)
- Iron Oil Tank and Historical Service Station "Oil and Gas", Southwest corner of State Highway (Lillie Avenue) and Beighle (Valencia Road) (ISA Map ID No. 27)

We subsequently performed a preliminary site investigation (PSI) to further evaluate: 1) potential and documented environmental impairments within the selected alternative project boundaries, 2) the impact on project costs, 3) potential responsible party liability, 4) management and disposal options of potentially contaminated soil, groundwater, and materials, and 5) construction worker health and safety requirements. The following summarizes the findings of the PSI Report, dated June 30, 2010:

- Based on the total CAM 17 metals and organics concentrations for both soil and groundwater, 11 of the 12 sites are now considered low risk to the project. Soil excavated from these project locations would not be considered a hazardous waste. No additional investigation in these areas is recommended.
- A geophysical survey performed as part of the PSI identified a suspected UST located within Caltrans ROW at the Iron Oil Tank and Historical Service Station (ISA Map ID No. 27). However, the survey was inconclusive. We recommended that this area be further investigated to determine whether a UST is present.

2.0 SCOPE OF SERVICES

We performed the following scope of services as requested by Caltrans in TO-4:

2.1 Pre-field Activities

- An onsite TO meeting was conducted on November 9, 2010 (attended by Caltrans Task Order Manager, Jim Tkach, Geocon representative, Chris Merritt, and Caltrans maintenance department representative). The purpose of the TO meeting was to identify and discuss the project boundaries and existing site conditions, and to review the scope of work.
- Revised the existing Health and Safety Plan (HSP), dated April 2010, which provided guidelines on the use of personal protective equipment and the health and safety procedures implemented during the activities.

- Retained the services of Advanced Geological Services (AGS) to perform a geophysical survey at the Site.
- Retained the services of Advanced Technology Laboratories, Inc. (ATL) a Caltrans-approved, California-licensed laboratory.
- Coordinated for rental of a backhoe to be operated by Geocon personnel.
- Notified Underground Service Alert (USA) at least 48 hours prior to fieldwork involving excavation activities.

2.2 Field Activities

On November 16, 2010, a Caltrans maintenance crew removed the chain link fence to provide access to the Site. On November 16 and 17, 2010, AGS performed a geophysical survey at the project location to further investigate the suspected UST and potential oil wells. The geophysical survey identified the suspected UST associated with the Iron Oil Tank and Historical Service Station (ISA Map ID No. 27), and further investigated 12 potential oil well locations.

Geocon operated a backhoe to pothole at the location of the suspected UST, and once located, the top of the UST was exposed. Geocon collected a sample of the water in the UST for laboratory analysis. Photographs taken during the field investigation are provided as Appendix A.

3.0 INVESTIGATIVE METHODS

3.1 Geophysical Survey

AGS performed a geophysical survey of four sites within the project area along northbound US-101 identified as: 1) Bike Path, 2) Overpass, 3) Firehouse, and 4) Historical Service Station. The investigation was performed using a Geometrics Model G-858 gradient magnetometer (MAG) and a Trimble Pro-XR global positioning system (GPS) to provide positioning data for the magnetometer survey and to map certain site features (e.g., chain-link fences, metal grates) that may affect the geophysical data. AGS marked the buried metal anomalies that were delineated during the previous investigation in May 2010 at the Historical Service Station and cleared brush from the Firehouse and the Historical Service Station areas. AGS performed the MAG survey by hand-carrying the G-858 magnetometer along generally east-west lines spaced approximately five feet apart. After the magnetometer survey was completed, AGS mapped the survey area using the GPS to prepare a base map for each area. The geophysical survey findings are discussed in Section 4.1. A copy of the AGS report is provided as Appendix B and identified anomaly locations are included as Appendix C.

3.2 Potholing

Geocon personnel operated a rented backhoe to excavate the area of the suspected UST at the Iron Oil Tank and Historical Service Station site, along the unpaved shoulder of US-101, adjacent to Lillie Avenue. The backhoe bucket was used to carefully remove surface soil from the location until the top surface and ends of the UST were exposed. The backhoe was then used to remove surface soil from two areas to the north and southeast of the UST that were identified as potential buried metal objects or suspected oil wells during the geophysical survey. After the potholing investigation was completed, the backhoe was used to replace the surface soil over the UST and the remaining excavated areas. Metal pipe debris encountered during the excavation activities was stockpiled adjacent to the fence along the northern portion of the site.

3.3 Sampling Procedures

A water sample (TANK1) was collected from the UST using a clean disposable bailer and placed into labeled, pre-preserved, laboratory-supplied containers. The sample was stored in a chilled cooler and delivered to ATL for analysis under chain-of-custody (COC) documentation.

Quality assurance/quality control (QA/QC) procedures performed during the field activities included decontamination of any reusable sampling equipment. All reusable equipment was cleansed before use by washing the equipment with an Alconox™ solution followed by a double rinse with deionized water. The field sampling activities were performed under the supervision of Geocon's field manager.

3.4 Laboratory Analyses

The water sample (TANK1) was analyzed for the following under a routine seven-day turn-around-time (TAT).

- Total petroleum hydrocarbons as gasoline (TPHg), as diesel (TPHd), and as motor oil (TPHmo) using United State Environmental Protection Agency (USEPA) Test Method 8015M.
- VOCs using USEPA Test Method 8260B, including: benzene, toluene, ethylbenzene, and xylenes (BTEX) and fuel oxygenate compounds (FOCs) [methyl tert butyl ether (MTBE), tert-butanol (TBA), di-isopropyl ether (DIPE), ethyl-tert-butyl ether (ETBE), tert-amyl methyl ether (TAME)], 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, isopropylbenzene, isopropyltoluene, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.
- CAM 17 Metals using USEPA Method 6010/7000.
- Method 6010/7000.

3.5 Laboratory QA/QC

QA/QC procedures were performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. The laboratory QA/QC procedures included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever was more frequent, with the spike made at ten times the detection limit or at the analyte level.

Prior to submitting the sample to the laboratory, the COC documentation was reviewed for accuracy and completeness. Reproductions of the laboratory report and COC documentation are presented in Appendix D.

4.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

4.1 Geophysical Survey

Below is a summary of the results of the AGS geophysical survey; a copy of the AGS report is included as Appendix B. Within the four investigated sites, AGS identified twelve anomalies that warrant consideration as possible oil well locations. Eight of the identified anomalies were near potential oil well locations identified on figures provided by Caltrans. The potential oil well locations were based upon maps reviewed during Geocon's ISA from the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (CDCDOGGR).

A descriptive summary of the anomalies identified by geophysical survey is provided in the table below. Figures depicting the anomaly locations are included as Appendix C.

Geophysical Survey Results Summary Table

Anomaly ID	Area Designation	Potential Oil Well Location	Comments
A-1	Bike Path	Somewhat unlikely	Adjacent to concrete structures with reinforcing metal in the drainage ditch and in the walls of the adjacent parking/storage facility. Near two reported well locations.
A-2	Overpass, west	Somewhat unlikely	Adjacent to reported well location shown on US Route 101 freeway roadbed. May be due to vertically-driven support piles associated with the raised freeway roadbed.

A-3	Overpass, east	Unlikely	Adjacent to U.S. 101 roadbed and similar in character to A-2; however, no well location reported in vicinity. May be due to vertically-driven support piles associated with the raised freeway roadbed.
A-4	Firehouse	Somewhat unlikely	Adjacent to Firehouse building and reported well location; may be caused by chain-link fence. Well location shown beneath building.
A-5	Historical Service Station	Unlikely	Adjacent to Firehouse building fence; a reported well location is approximately 30 feet east; however, likely caused by fence.
A-6	Historical Service Station	Unlikely	Previously identified during the May 2010 geophysical investigation (see Preliminary Site Investigation Report, dated June 30, 2010); was uncovered by GEOCON in November 2010 and consisted of metal pipe debris. No well is reported in the vicinity.
A-7	Historical Service Station	Unlikely	Area south of the 1,000-gallon UST, near a reported well location. Area was excavated and a metal pipe was exposed; no evidence of an oil well was identified.
A-8	Historical Service Station	Unlikely	Associated with a storm drain vault; magnetic data indicate that additional metal may be present north of the vault, which may be part of the storm drain complex or an unrelated metal object(s). No well is shown in the vicinity.
A-9	Historical Service Station	Somewhat likely	A-9 is a 30-ft wide anomaly complex co-located with reported well location; indicates the presence of two metal objects, or clusters of objects, approximately 15 feet apart.
A-10	Historical Service Station	Unlikely	Approximately 25 feet south of a reported well location. Its linear nature suggests a metal pipe, rectangular pad, or other type of elongated sub-structure. A-10 does not appear to be a well or UST.
A-11	Historical Service Station	Unlikely	Adjacent to chain link fence, approx 25 feet east of reported well location; probably caused by fence.
A-12	Historical Service Station	Likely	Located between two reported well locations; most closely exhibits a signature indicative of steel well casing.

4.2 Site Conditions

Surface soil encountered during the potholing investigation generally consisted of sandy fill materials from the surface to depths up to approximately 6 feet. Groundwater was not encountered during the investigation.

The geophysical survey identified the UST directly east of an electrical box and conduit connected to the nearby light pole, as shown on Figure 2. The UST was located during the potholing activities at a depth of approximately 3 feet. The UST dimensions were measured at approximately 11 feet in length and 3.75 feet in diameter, which equates to a capacity of approximately 1,000 gallons. Coordinates for the ends of the UST were recorded using GPS equipment, with an error of no more than one meter.

Geocon also used the backhoe to pothole at the locations of two potential metal objects identified by the geophysical survey. These locations were approximately 50 feet east, and directly west, of the UST. Both areas contained metal pipe fragments to a depth of approximately 6 feet. After the potholing and UST water sampling activities were completed, the trenches were backfilled with the excavated soil. Metal pipe debris was stockpiled along the fence in the northern portion of the site. A Site Plan showing the locations of the UST and the areas of pipe debris are depicted on Figure 2.

4.3 UST Water Sample Analytical Results

Analytical results for the water sample collected from the UST (TANK1) are summarized below and in Table 1. A copy of the laboratory report is provided as Appendix D.

- TPHd was reported at a concentration of 1.7 milligrams per liter (mg/l).
- TPHmo was reported at a concentration of 2.3 mg/l.
- TPHg was not detected above the laboratory reporting limit of 1.0 mg/l.
- BTEX or FOCs were not detected above their respective laboratory reporting limits.
- VOCs were not detected above their respective laboratory reporting limits with the exception of chloromethane at a concentration of 0.61 micrograms per liter (µg/l).
- Barium was reported at 100 µg/l, lead at 28 µg/L, and zinc at 47 µg/l; no other CAM 17 metals were detected above their respective above their respective laboratory reporting limits.

4.4 Laboratory Quality Assurance/Quality Control

We reviewed the analytical laboratory QA/QC data provided with the laboratory report. These data show acceptable non-detect results and surrogate recoveries for the method blanks and acceptable recoveries and relative percent differences (RPDs) for the matrix spikes and matrix spike duplicates (MS/MSDs). Based on the laboratory QA/QC results, no additional qualification of the data presented herein is necessary, and the data are of sufficient quality for the purposes of this report.

5.0 CONCLUSIONS AND RECOMMEDATIONS

UST

An approximately 1,000-gallon UST was uncovered at the Iron Oil Tank and Historical Service Station site located along the unpaved shoulder of northbound US-101, adjacent to Lillie Avenue. At the time of the excavation, the UST was nearly filled with water, which was sampled and submitted for laboratory analysis. The water sample contained TPHd, TPHmo, lead, and zinc above Santa Barbara County Fire Protection District (FPD) Investigation Levels. BTEX and FOCs were not detected in the water sample above laboratory reporting limits.

The FPD has prepared the *Leaking Underground Storage Tank & Site Mitigation Unit Manual (LUFT and SMU Manual)*, dated January 2007, "to aid responsible parties, their consultants, and others who perform environmental investigations and cleanups within Santa Barbara County." The *LUFT and SMU Manual* provides details for UST removal requirements, which are summarized below:

A completed "Application to Permanently Close an Underground Hazardous Materials Storage Tank" must be submitted, with the applicable fees, to FPD. An approved permit is required before field activities can begin. Application processing requires a minimum of 14 days. If soil and/or groundwater contamination above FPD Action Levels is encountered in the tank pit, interim remedial action may be required. Tanks removed and installed within city jurisdictions may require additional permits fro that jurisdiction. A FPD Specialist shall witness and provide written documentation of a UST removal. Laboratory analysis of soil samples is required. The number of samples collected is based upon the size of the tank. Contamination detected during the UST removal that is found to be above FPD Action Levels will require further assessment and possibly further remediation.

When an UST system is closed, repaired, and/or modified, the California Health and Safety Code (Division 20, Chapter 6.7, Section 25298) requires the UST owner/operator to "demonstrate to the local agency that there has been no significant soil contamination resulting from a discharge in the area surrounding the UST or facility." A FPD Specialist must be on site to witness tank removal and sampling. The following are typical sampling requirements (which may be modified by a FPD Specialist based upon site conditions):

- Tanks over 500-gallon capacity shall have soil samples collected from each end of the tank, collected at a depth of two feet below the lowest portions of tank.
- Soil samples under piping shall be collected under each connection, at a minimum rate of one sample per 20 linear feet of piping.
- One sample per 25 cubic yards of soils removed during the tank excavation.
- If groundwater is encountered in the UST pit, then a groundwater sample must also be collected.

FPD encourages over-excavation of tank pits that appear to have limited contamination (<25 yards of contaminated soil). In such cases, FPD may be able to give verbal approval for additional soil sample locations. The tank excavation shall not be backfilled without prior approval of FPD (typically after analytical results are reviewed by FPD). FPD may approve the use of clean overburden material to backfill the excavation provided soil samples indicate that contaminants are not detected above FPD Investigation Levels. Under no circumstances may soil with contaminants greater than FPD Investigation Levels be used as backfill.

Geocon recommends that the UST, its contents, and metal pipe debris be removed and properly disposed according to FPD regulations. The following provides a summary of the recommended approach and opinion of probable costs for removing the UST and associated material:

- Mobilization, including pre-field coordination activities for soil bins, traffic control and backhoe rental ($6,650)
- Procure UST removal permit from the Santa Barbara County FPD ($4,300)
- Remove and dispose water and rinse water from inside UST using a vacuum truck ($5,000)
- Excavate and dispose/recycle soil, if necessary, concrete debris, and UST ($3,000 to $14,000). Cost depends on whether the excavated soil may be reused as backfill.
- Collect and analyze confirmation soil samples; collect and analyze a groundwater sample if water is present in the excavation pit ($6,000)
- Procure fill material, if needed, and restore site ($4,000 to $6,500)
- Prepare UST closure report ($2,000)

The opinion of probable cost for the UST removal activities is between $31,000 and $45,000.

Oil and Gas Wells

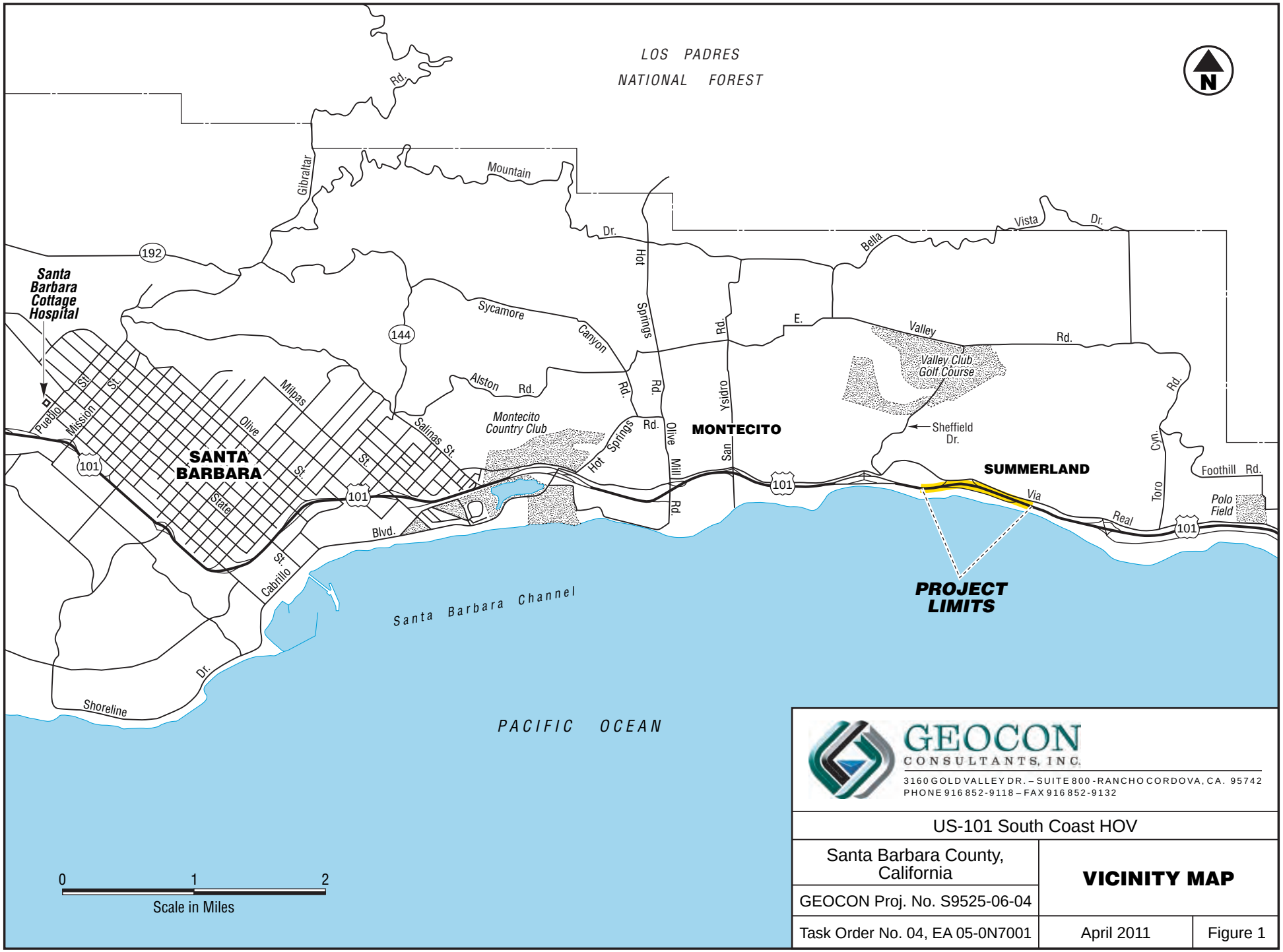
The South Coast 101 HOV Lane Project is located within and near the Summerland Oil Field. Numerous oil and gas wells have been reported in the near vicinity and possibly within the project ROW.

The geophysical survey identified two magnetic anomalies at the Historical Service Station site (A-9 and A-12) that likely may represent oil wells. Prior to construction work in areas with known former oil or gas wells, the CDCDOGGR recommends conducting field meetings to confirm well locations. If encountered, exposed oil and gas wells, or inadequately abandoned wells, within the project boundaries will require proper abandonment in accordance with CDCDOGGR requirements. Field meetings conducted with CDCDOGGR staff should be conducted as part of preliminary site investigation work and performed prior to commencement of construction activities. We recommend that contractors are notified of potential oil well locations prior to the start of project construction. If oil and gas wells are encountered during the project, the CDCDOGGR should be notified and the wells properly abandoned in accordance with applicable regulations.

6.0 REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. We strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.



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US-101 South Coast HOV

Santa Barbara County, California

GEOCON Proj. No. S9525-06-04

Task Order No. 04, EA 05-0N7001

VICINITY MAP

April 2011

Figure 1

0 60
Scale in Feet

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Iron Oil Tank and Historical Service Station Site		
Summerland, Santa Barbara County, California	**SITE PLAN**	
GEOCON Proj. No. S9525-06-04		
Task Order No. 04, EA 05-0N7001	April 2011	Figure 2

TABLE 1
Summary of UST Water Sample Results
Iron Oil Tank and Historical Service Station Site
South Coast 101 HOV Lane Project, Summerland, CA

Sample ID	TPHg (mg/L)	TPHd (mg/L)	TPHmo (mg/L)	BTEX (ug/L)	FOCs (ug/L)	VOCs (ug/L)	CAM 17 Metals (ug/L)
TANK1	<0.050	1.7	2.3	ND	ND	Chloromethane=0.61	Barium=100 Lead=28 Zinc=47
FPD Investigation Levels for Groundwater	1.0	1.0	1.0	---	---	---	Barium=1,000 Lead=15 Zinc=5,000

Notes:

TPHd = Total Petroleum Hydrocarbons as diesel
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHmo = Total Petroleum Hydrocarbons as motor oil
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
FOCs = Fuel Oxygenate Compounds
VOCs = Volatile Organic Compounds
mg/L = milligrams per liter
ug/L = micrograms per liter
< = Analyte was not detected at or above the stated detection limit
ND = None detected
FPD Investigation Levels = Santa Barbara County Fire Department - Fire Protection Division -
Leaking Underground Storage Tank & Site Mitigation Unit Manual, Tables F-3 and F-5, January 2007
FPD investigation level for TPH is for aggregate of all carbon chains.

APPENDIX A

Photo 1 – Historical Service Station site, viewed from the east.

Photo 2 – Historical Service Station site, viewed from the north.

Photo 3 – Excavation at suspected UST location, viewed from the north.

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PHOTOGRAPHS 1, 2, & 3		
South Coast 101 HOV Lane Project Summerland, Santa Barbara County, California		
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Photo 4 – Metal pipe debris associated with UST.

Photo 5 – Metal pipes and exposed top of UST.

Photo 6 – Exposed end of UST and fill port.

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PHOTOGRAPHS 4, 5, & 6		
South Coast 101 HOV Lane Project Summerland, Santa Barbara County, California		
S9525-06-04		April 2011

Photo 7 – UST excavation, viewed from the south.

Photo 8 – Metal pipe debris removed from excavation.

Photo 9 – Excavation trench with exposed asphalt and concrete debris, viewed from the north.

Photo 10 – Site restoration, viewed from the northwest.

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PHOTOGRAPHS 9 & 10		
South Coast 101 HOV Lane Project Summerland, Santa Barbara County, California		
S9525-06-04		April 2011

APPENDIX B

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December 17, 2010

Chris Giuntoli
Project Scientist
GEOCON Consultants, Inc.
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Geophysical Investigation Report
U.S. Route 101 Improvement Project, Phase II
Lookout Park Road to Temple Road
Summerland, Santa Barbara County, California

Mr. Giuntoli,

This report presents the results of Advanced Geological Services, Inc. (AGS) geophysical investigation along U.S. 101 in the city of Summerland, Santa Barbara County, California (Figure 1).

The objective was to search for up to 17 suspected abandoned oil wells in four areas along a planned sound wall alignment so their presence and whereabouts would be known prior to construction of the sound wall. The investigation was performed on November 16 and 17 by AGS geophysicist Roark Smith, with oversight by Mr. Chris Merritt of GEOCON and a representative from the California Department of Transportation (Caltrans).

Figure 1 – Map showing the four survey areas

AGS scanned the four areas with a gradient magnetometer that was configured to digitally record both the magnetic data and positioning data supplied by a Global Positioning System (GPS). Briefly, a magnetometer measures the strength of the earth's magnetic field; ferro- (iron) metal objects are detected because they cause localized distortions in the earth's magnetic field. These distortions are manifested as anomalous magnetic measurements in the vicinity of the metal object. In particular, a large metal object like a steel well casing will produce a distinctive high-amplitude magnetic anomaly that is readily apparent in a magnetic data set.

1.0 RESULTS SUMMARY

The survey results are presented on Figures 2 through 5. The figures show numerous metal-indicating responses at all four sites. Most of the metal-indicating responses are readily attributed to known objects and therefore can be discounted as indicating possible well locations; however, AGS has identified 12 anomalies that cannot be associated with known objects, and exhibit sufficient amplitude and extent to warrant consideration as possible well locations. Of the 12 anomalies identified, 8 are near reported well locations. The anomaly locations are shown on Figures 2 through 5 and the anomaly characteristics are summarized in Table 1, below.

2.0 DESCRIPTION OF INVESTIGATION AREAS

The investigation was performed in four areas along the northern side of U.S. 101, as shown on Figure 1. For clarity, the areas are designated as Bike Path, Overpass, Firehouse, and Historic Gas Station sites; detailed maps of the areas are shown on Figures 2, 3, 4, and 5. The Bike Path site is a long, narrow area along a newly-constructed multi-use pathway situated between U.S. 101 and a steep slope. It measures approximately 30 feet by 330 feet (Figure 2). The Bike Path site includes an asphalt-paved multi-use pathway and a concrete drainage ditch, metal grates for storm water catch basins, and metal light poles. These metallic features produced noise in the magnetic data.

The Overpass site comprises two separate sub-areas along the north side of U.S. 101, east and west of the Lookout Park Road overpass (Figure 3). The eastern sub-area was approximately 40 feet by 150 feet while the western area was 40 feet by 100 feet. The Overpass site is bounded to the south by a metal guard rail delimiting U.S. 101; the southern boundary also contains metal sign posts and sprinkler heads, which produced noise in the magnetic data. The Overpass site is located on the sloping surface of the raised U.S. 101 roadbed. The ground surface in the western sub-area is covered with dry grass and contains a few trees. The ground surface of the eastern sub-area is covered with “ice plants.”

The Firehouse site is a small area comprising the densely-vegetated surrounds of the existing Carpinteria/Summerland Firehouse. After removing some of the vegetation, the investigation was performed within a narrow, 40- by 100-foot-long “L”-shaped area immediately west and south of the Firehouse building (Figure 4).

The Historical Service Station site is a 40- by 450-foot area north of the U.S. 101 freeway off-ramp, on an elevated fill terrace between Valencia Road and Temple Road in the town of Summerland, California (Figure 5). The sloping ground surface is mostly covered with “ice plants,” and also includes areas of dry grass, a few trees, and areas of thick brush. It is worth noting that a portion of the Historical Service Station site was previously investigated by AGS in May, 2010 to look for a suspected underground storage tank (UST). That investigation resulted in the discovery of a 4- by 11-foot UST (approximately 1,000 gallons), which was unearthed by GEOCON on November 16, 2010 while AGS was performing the current investigation to look for abandoned wells.

3.0 GEOPHYSICAL METHODS AND EQUIPMENT

The geophysical investigation was performed using a Geometrics Model G-858 gradient magnetometer. Additionally, AGS used a Trimble Pro-XR global positioning system (GPS) to provide positioning data for the magnetometer survey and to map certain site features (e.g., chain-link fences, metal grates) that may affect the geophysical data. The GPS data were used to prepare a geo-referenced site map upon which the investigation findings are presented (Figures 2 through 5).

The magnetic method measures the strength of the earth's magnetic field at a given location (i.e., the location of the magnetic sensor). Ferrous (iron-containing) metal objects distort the earth's magnetic field, and these distortions are manifested as variations in the strength of the magnetic field as measured with a magnetometer. The amount (amplitude) of this variation (anomaly) from background measurements provides an indication of the amount (mass) of metal present and the size of the anomaly "footprint" can be used to estimate the configuration and burial depth of the anomaly source body. Because of its high sensitivity, magnetics is an effective method for searching for large metallic objects. In particular, a long, vertically-oriented, cylindrical metal object, such as a steel well casing, tends to produce a distinctive high-amplitude response that is likely to stand out against the widespread magnetic noise (from other metal objects) expected at the three sites.

4.0 FIELD PROCEDURES

To facilitate GEOCON's backhoe excavation to look for the suspected UST, AGS first marked the buried metal anomalies that were delineated during AGS' May, 2010 investigation at the Historical Service Station site. Next, AGS used a machete and loppers to clear brush from the Firehouse site, to the extent practicable. In particular, AGS cleared a narrow pathway behind the Firehouse building; AGS also trimmed back the encroaching brush along the northern edge of the Historical Service Station site. No brush clearing was required at the Bike Path and Overpass sites.

Next, AGS performed the MAG survey by hand-carrying the G-858 magnetometer along generally east-west lines spaced approximately five feet apart. The magnetometer was programmed to record ten (10) magnetic measurements per second, which equates to one measurement approximately every 0.5 feet along each survey line. Horizontal positioning data for the magnetometer survey were obtained using a GPS worn on the geophysicist's back; the GPS fed positioning data to the magnetometer data logger in real-time as the survey progressed. After the magnetometer survey was completed, AGS mapped the survey area using the GPS to prepare a basemap for each site.

To avoid interference from GEOCON's concurrent backhoe investigation at the Historical Service Station site, AGS first surveyed the Firehouse site, followed by the eastern portion of the Historical Service Station site. Accompanied by the Caltrans representative, AGS then moved to the Bike Path site, followed by the Overpass site. Finally, after the backhoe had been driven away, AGS returned to the Historical Service Station site to complete the survey work there. Overall, AGS obtained approximately 1,500, 1700, 320, and 6,900 line-feet of magnetometer data at the Bike Path, Overpass, Firehouse, and Historical Service Station sites, respectively, for a grand total of approximately 10,400 line feet of data.

5.0 DATA PROCESSING AND ANALYSIS

The MAG data were downloaded to a laptop computer and processed using kriging algorithm from GEOSOFT OASIS montaj earth science software to produce color-filled contour maps showing magnetic response variations across the four sites. High amplitude magnetic response variations that are not readily attributable to known site features are referred to as "anomalies" and are attributed to subsurface source bodies, which may include USTs, buried utilities, reinforced concrete foundations, and miscellaneous metallic debris. On the total magnetic field contour maps, anomalies are indicated by "hot" (red and pink) and "cool" (blue) colors representing magnetic readings above and below background levels, respectively. Metal objects often produce "dipolar" magnetic anomalies, which have both positive (above background) and negative (below background) components. Magnetic anomalies associated with wells, however, often exhibit a high-amplitude "monopole" response that can help differentiate a well casing from other types of metal objects.

To aid the analysis, data profiles for each survey transect were prepared and inspected. On the data profiles, anomalies are indicated by large deflections in the data trace; the width and amplitude of these deflections can provide an indication of the size and burial depth of the anomaly source body. The profiles are especially useful for identifying bad data caused by, say, sensor failure or a loose connection within the magnetometer system. Additional data processing included removal of data "dropouts" and a "lag" correction to account for the delay in instrument response and the offset between the GPS antenna and the magnetometer sensor locations.

The MAG data were also subjected to analytic signal (AS) processing. AS processing is performed to account for the extreme sensitivity of the magnetic method; contour maps of magnetic data typically show anomalies that are greatly enlarged and distorted compared to the footprint of the detected metal object. AS-processing renders magnetic anomalies into pink-colored "hot spots" at metal locations and tends to show a detected metal object's size and location more accurately than a total magnetic field contour map. Finally, AGS inserted the site features maps prepared from the GPS data into the contour maps so that magnetic responses associated with known metal objects could be identified and discounted as possible well indications. In addition, AGS added the reported well locations as shown on the provided Caltrans maps. The registration of the Caltrans maps was performed graphically by matching features (e.g., roads and buildings) to AGS' site maps; however, the Caltrans maps' small scale (i.e., showing a relatively large area) degraded their accuracy for registration to AGS' large-scale (small-area) site maps. Geographic coordinates for the reported well locations, if available, would improve the accuracy of the well locations' placement on the magnetic contour maps.

Final interpretation was performed using the combined analytic signal (AS)/site features map upon which the magnetic data profiles for each survey line were placed to assess the amplitude and configuration of each anomaly. On the basis of AGS' experience, steel-cased wells typically produce high-amplitude monopole magnetic anomalies of 1,000 nanoTeslas or greater that exhibit a circular shape in map view. AGS looked for these types of anomalies in the magnetic data obtained for this investigation. It is worth noting, however, that the magnetic response from a well casing could be distorted by other metal objects nearby and thus not exhibit a typical response. Accordingly, AGS considered all high-amplitude

magnetic responses as possible well indications, especially those near reported well location, and discounted only those that could be readily attributed to known objects.

6.0 RESULTS

The survey results are presented on Figures 2 – 5 as a pair of color-filled contour maps for each site. The upper map on each figure shows the results of analytic signal (AS) processing of the total magnetic field data; the lower map is a contour map of magnetic field data. On the AS maps, metal-containing areas are indicated by color pink. These AS maps show numerous metal-containing areas at all four sites. Most of these metal-indicating responses are readily attributed to known objects and therefore can be discounted as indicating possible well locations; however, AGS has identified 12anomalies that cannot be associated with known objects and exhibit sufficient amplitude and extent to warrant consideration as possible well locations. Of the 12 anomalies identified, 8 are near reported well locations. The anomaly locations are shown on Figures 2 -5 and their characteristics are summarized in Table 1, below.

Overall, the total magnetic field data show a wide variation in background readings, ranging from a low of approximately 42,600 nanoTeslas (nT) at the Firehouse site to a high of 47,000 nT at the Historical Service Station site. The wide variation in background response is attributed to variations in the nature of various metal-containing structures and their proximity to the survey areas, and to a lesser extent, the natural geologic variation of the soil and underlying bedrock. Metal-containing structures that affected the magnetic data included buildings, fences and guard rails, vehicles, and the reinforced concrete components of the U.S. 101 freeway.

The results at each site are discussed below, and summarized afterward in Table 1.

6.1 Bike Path Site (Figure 2)

Most of the metal areas shown on the AS map at the Bike Path site can readily attributed to known metal objects such as light poles and DI grates. The extensive anomaly complex in the eastern portion of the site, designated anomaly A-1, warrants consideration because it is in the vicinity of two reported well locations; however, it is likely that the magnetic response there was caused by reinforcing metal in the drainage ditch and in the walls of the adjacent parking/storage facility.

6.2 Overpass Site (Figure 3)

Most of the anomalies at the Overpass site are clustered along the metal guard rail along the U.S. 101 freeway. Some anomalies are associated with metal signs and sprinkler heads, but two large, high-amplitude anomalies (A-2 and A-3) warrant consideration. Anomaly A-2 is adjacent to a reported well location, which is shown on the freeway roadbed. Anomaly A-3 is similar in character to A-2, however there no well location reported in the vicinity. Aside from a well, another large, localized metal object that could produce a magnetic anomaly like A-3 is vertically-driven support pile associated with the raised freeway roadbed. A-2 could also be caused by such an object.

6.3 Firehouse Site (Figure 4)

After discounting localized, low-amplitude responses associated with a shed and a large metal pole and its reinforced concrete support pad, AGS identified anomaly A-4, which is near two reported well locations shown to be partially beneath the firehouse building. A-4 has a significant negative component, suggesting that it may have been caused by the adjacent chain-link fence, which may have been inadvertently touched by a magnetic sensor while surveying through the thick vegetation.

6.4 Historical Service Station Site (Figure 5)

The Historical Service Station site included the previously-investigated UST search area, the 400-foot long ice plant-covered raised fill terrace to the east, and the 100-foot long raise area extending west to the Firehouse. After discounting the high-amplitude metal-indicating responses associated with metal signs and light poles, and the lower-amplitude "spot anomalies" along the southern edge of the site that were caused by passing vehicles, AGS identified eight anomalies (A-5 through A-12) at the Historical Service Station site. Half of these anomalies are clustered in the western quarter of the site, roughly within the former UST investigation area, where an abundance of buried metal is indicated. Moving from west to east, anomaly A-5 is a below-background "negative" anomaly that was probably caused by the chain-link fence. A-6 is a previously-identified buried metal area that was partially excavated during GEOCON's backhoe investigation in November, 2010. A-7 is associated with the 1,000-gallon UST that was unearthed by GEOCON in November; in addition to the UST response, the magnetic data indicate that A-7 includes additional buried metal adjacent to the reported well location south of the UST. It is worth noting that an abandoned metal pipe was discovered in this area.

A-8 is associated with a storm-drain vault, and the magnetic data indicate that additional metal may be present north of the vault. It is not known if the metal is part of the storm drain complex or an unrelated metal object(s). No well is reported in the immediate A-8 area. A-9 is co-located with a reported well location; its bi-lobed nature indicates the presence of two metal objects, or clusters of objects, separated by a distance of approximately 15 feet. A-10 is a relatively low-amplitude anomaly approximately 25 feet south of a reported well location. Its linear nature indicates a metal pipe or other type of elongated structure such as a rectangular-shaped reinforced concrete pad. Although A-10 does not appear to be a well, AGS has called it out in an abundance of caution. A-11 is another "negative" anomaly similar to A-5; it is most likely caused by the adjacent chain-link fence. A-12 is the easternmost anomaly at the edge of the existing brush line between two reported well locations; of all the anomalies identified, A-12 most closely exhibits the characteristics of a typical anomaly produced by a steel-cased well.

Table 1 Results Summary

Anomaly Designation	**Site**	**Amplitude (nT, approx.)**	**Near Reported Well Location?**	**Comments**
A-1	Bike Path	5,100	Y	A-1 anomaly complex adjacent to reinforced concrete structures and two reported well locations
A-2	Overpass, west	14,000	Y	A-2 is adjacent to reported well location shown on U.S. 101 freeway roadbed.
A-3	Overpass, east	11,000	N	A-3 is adjacent to U.S. 101 roadbed and similar in character to A-2; however, no well location reported in vicinity.
A-4	Firehouse	-6,000	N	Dipolar anomaly adjacent to Firehouse building and reported well location; may be caused by a sensor brush against chain-link fence. Well location shown "beneath" building
A-5	Historical Service Station	-5,500	Y	A-5 is a below-background "negative" anomaly adjacent to Firehouse building fence; a reported well location is approx 30 feet east; however, A-5 was probably caused by the fence.
A-6	Historical Service Station	1,900	N	A-6 was previously identified during the May, 2010 UST investigation and was partially excavated by GEOCON in November. No well is reported in the vicinity, but magnetic data indicated substantial metal object(s) are present.
A-7	Historical Service Station	4,200	Y	A-7 is associated with the previously-discovered 1,000-gallon UST. The magnetic data indicate presence of additional buried metal south of the UST, near a reported well location.
A-8	Historical ervice Station	3,700	N	A-8 is associated with a storm drain vault. Although no well is shown in the vicinity, magnetic data indicate additional metal object(s) immediately north of the vault.
A-9	Historical Service Station	2,200	Y	A-9 is 30-ft wide, 2-lobed anomaly complex co-located with reported well location.
A-10	Historical Service Station	1,100	Y	A-10 is approximately 25 feet south of a reported well location. Its linear nature suggests a metal pipe, rectangular pad, or other type of elongated sub-structure.
A-11	Historical Service Station	-3,400	Y	Below-background "negative" anomaly adjacent to chain-link fence, approx 25 feet east of reported well location; probably caused by fence.
A-12	Historical Service Station	3,000	Y	Anomaly located between two reported well locations; best example of monopole anomaly signature indicative of well casing.

7.0 LIMITATIONS OF GEOPHYSICAL LOCATING METHODS

In general, a geophysical method's limitations for detecting a particular target are related to the target's size, burial depth, the amount of contrast in material properties between the target and surrounding material, and finally, the amount of interference from surrounding site features. For a target to be detected it must have sufficient size to reflect or otherwise disturb some the incoming energy used for detection. It also must have enough contrast with the surrounding material to reflect or otherwise disturb enough of the incoming energy so as to be detected. And, finally, it can't be buried so deeply that the reflected/disturbed energy is so dissipated that it is too weak to be detected when it returns to the surface.

Weak energy returns during geophysical investigations are further exacerbated by ambient noise like that produced by natural and cultural features, such as utilities, fences, parked vehicles, vegetative cover, and debris. For the subject well search investigation, any wells buried within 5 feet of the freeway roadbed or Firehouse building, or chain-link fences likely would not have been detected. Such items may cause interference that masks signals from the target object and limits or even prevents their detection.

8.0 CLOSING

All geophysical data and field notes collected as a part of this investigation will be archived at the AGS office. The data collection and interpretation methods used in this investigation are consistent with standard practices applied to similar geophysical investigations. The correlation of geophysical responses with probable subsurface features is based on the past results of similar surveys although it is possible that some variation could exist at these sites. Due to the nature of geophysical data, no guarantees can be made or implied regarding the targets identified or the presence or absence of additional objects or targets.

We appreciated working for you on this project and hope to work with you again. If you have any questions, I can be reached at (925) 808-8965 or Rsmith@Advancedgeo.com.

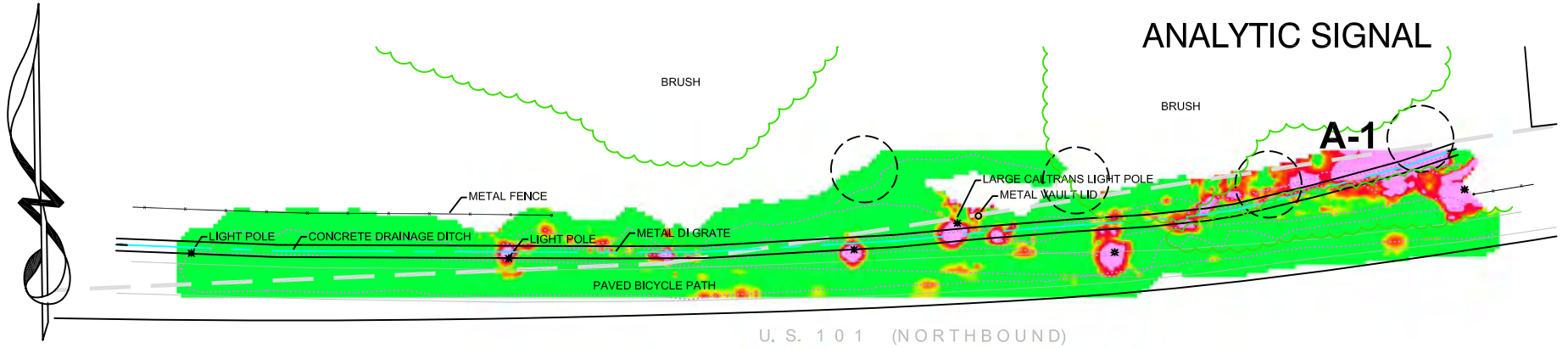
Respectfully,

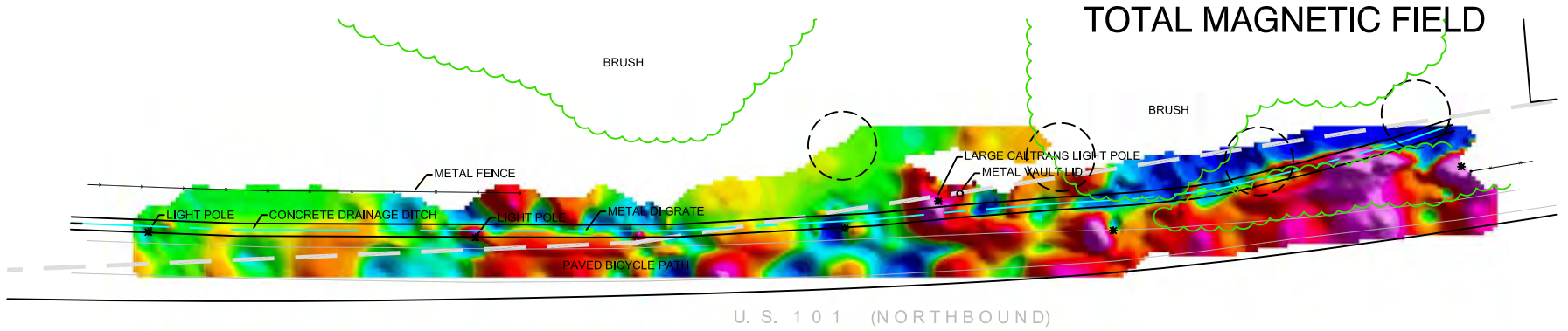
Roark W. Smith, GP 987

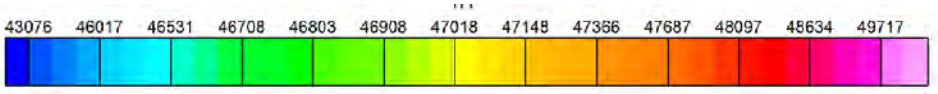
Senior Geophysicist
Advanced Geological Services

Figures:

Figure 1 Site Location Map (imbedded in Report text)
Figure 2 Magnetometer Survey Results, Bike Path Site
Figure 3 Magnetometer Survey Results, Overpass Site
Figure 4 Magnetometer Survey Results, Firehouse Site
Figure 5 Magnetometer Survey Results, Historical Service Station







TOTAL MAGNETIC FIELD (nT)

FEET

0 40 80

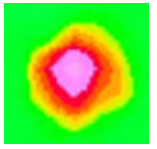
EXPLANATION

A-1 ANOMALY DESIGNATION

MAGNETOMETER SURVEY LINE

REPORTED WELL LOCATION (APPROX.)

SOUND WALL LOCATION (APPROX.)



METAL AREA ON ANALYTIC SIGNAL MAP

ADVANCED GEOLOGICAL SERVICES

GEOCON

1605 School Street
Suite 4
Moraga, CA 94556
(925) 631-1989

Magnetometer Survey Results
Bicycle Path Site

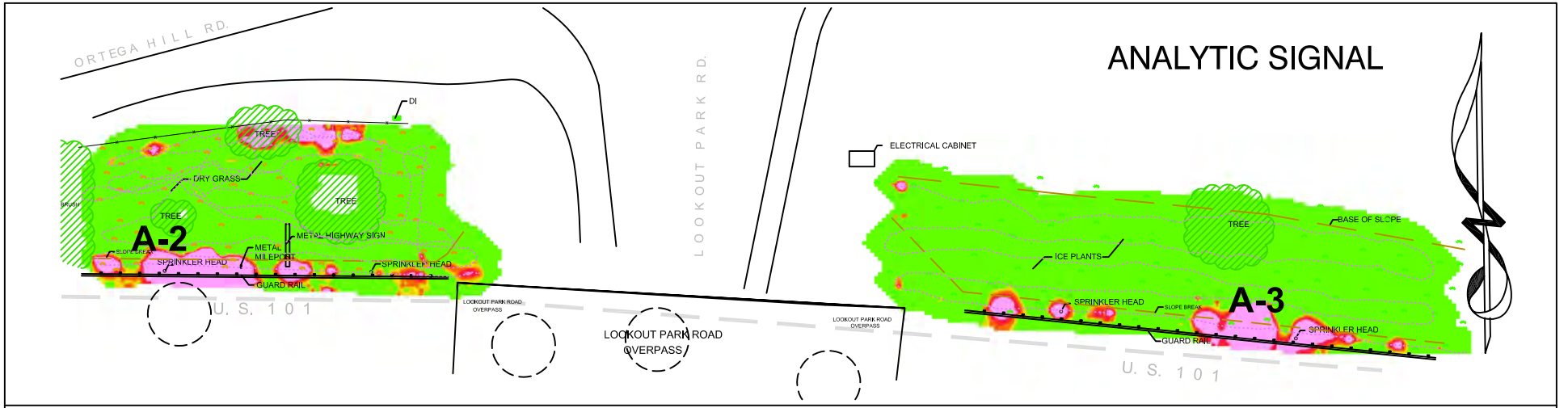
LOCATION: Summerland, Santa Barbara County, California

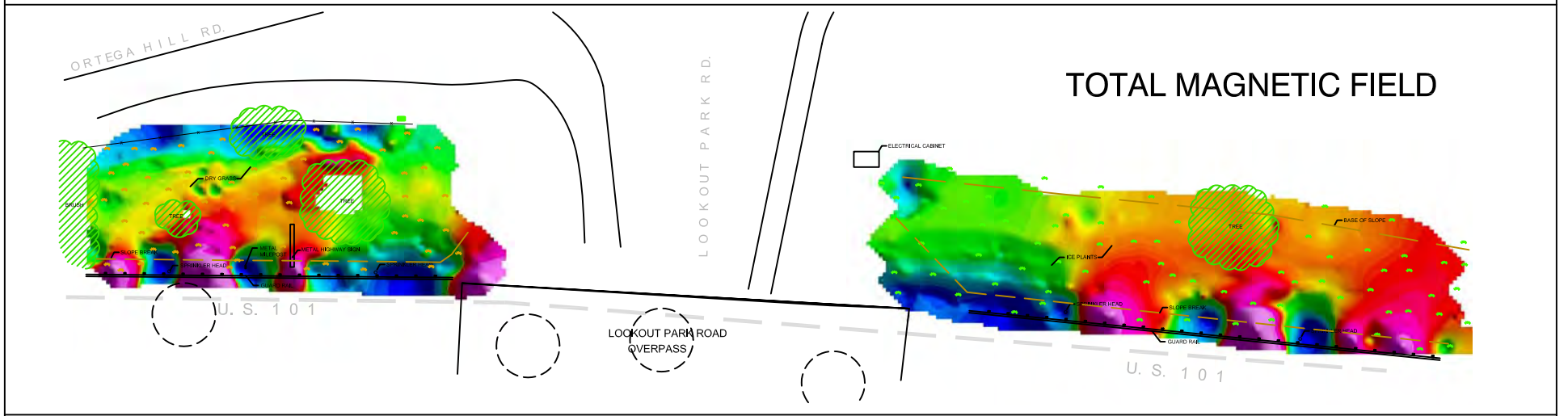
CLIENT: GEOCON Consultants, Inc.

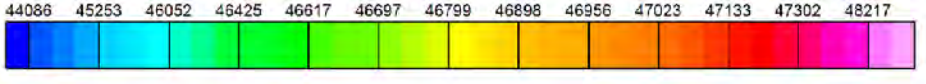
PROJECT #: 10-074-1CA

DATE: Dec 7, 2010 DRAWN BY: R. SMITH

FIGURE 2







TOTAL MAGNETIC FIELD (nT)

FEET

0 40 80

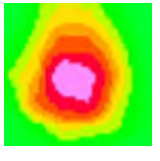
EXPLANATION

A-2 ANOMALY DESIGNATION

MAGNETOMETER SURVEY LINE

REPORTED WELL LOCATION (APPROX.)

SOUND WALL LOCATION (APPROX.)



METAL AREA ON ANALYTIC SIGNAL MAP

ADVANCED GEOLOGICAL SERVICES

GEOCON

1605 School Street
Suite 4
Moraga, CA 94556
(925) 631-1989

Magnetometer Survey Results
Lookout Park Road Overpass Site

LOCATION: Summerland, Santa Barbara County, California

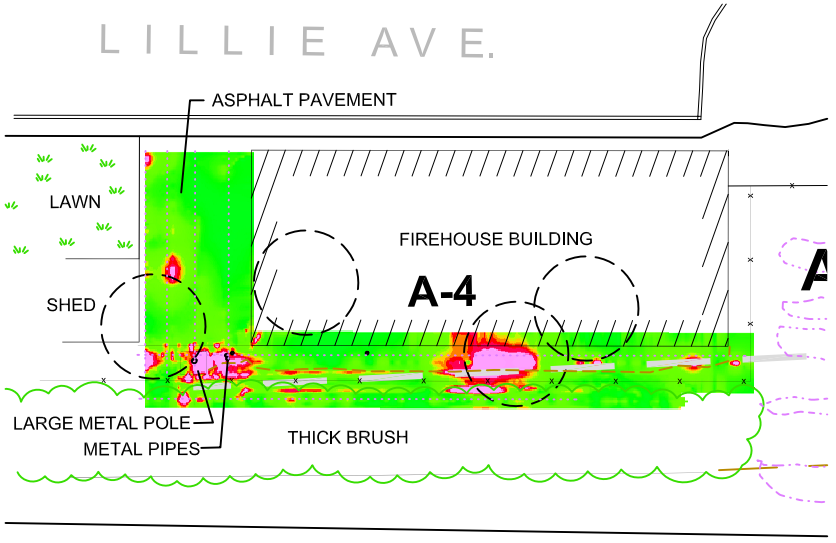
CLIENT: GEOCON Consultants, Inc.

PROJECT #: 10-074-1CA

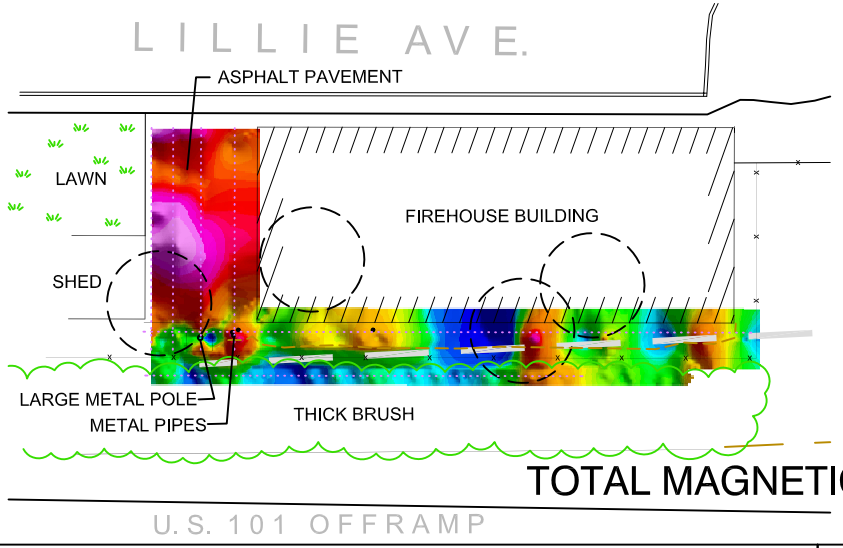
DATE: Dec 7, 2010

DRAWN BY: R. SMITH

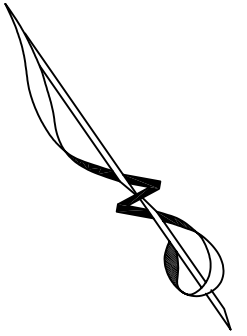
FIGURE 3



ANALYTIC SIGNAL



TOTAL MAGNETIC FIELD

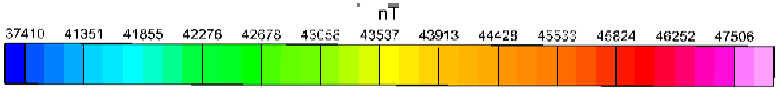


EXPLANATION

A-4	ANOMALY DESIGNATION
	MAGNETOMETER SURVEY LINE
	REPORTED WELL LOCATION (APPROX.)
	SOUND WALL LOCATION (APPROX.)
	METAL AREA ON ANALYTIC SIGNAL MAP

FEET

0 30 60



TOTAL MAGNETIC FIELD (nT)

ADVANCED GEOLOGICAL SERVICES

GEOCON

1605 School Street
Suite 4
Moraga, CA 94556
(925) 631-1989

Magnetometer Survey Results
Firehouse Site

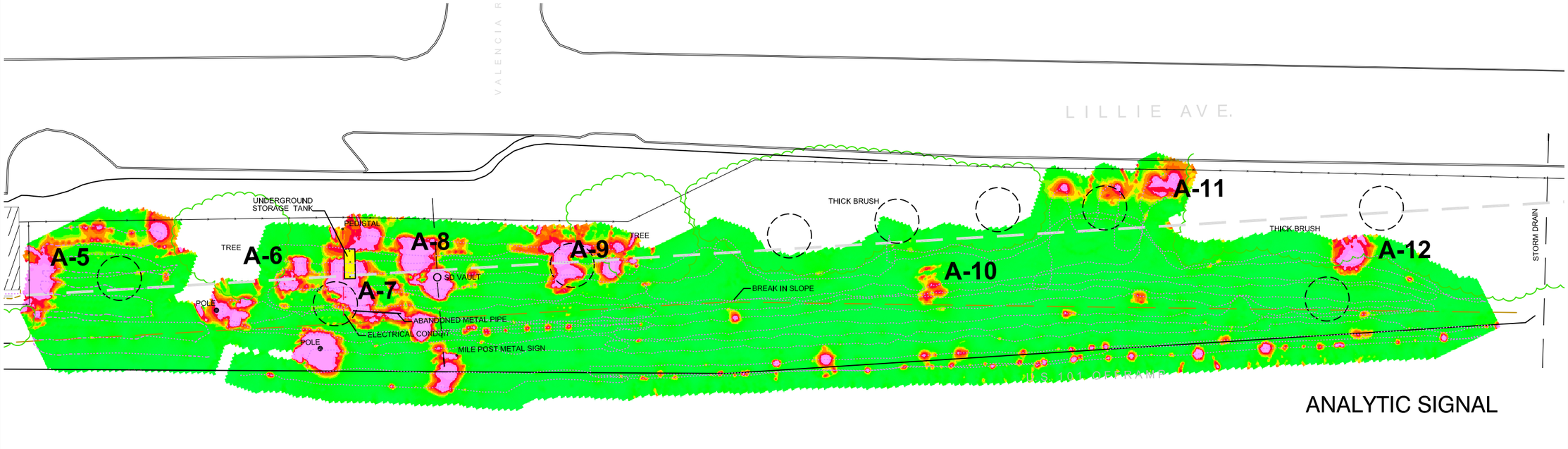
LOCATION: Summerland, Santa Barbara County, California

CLIENT: GEOCON Consultants, Inc.

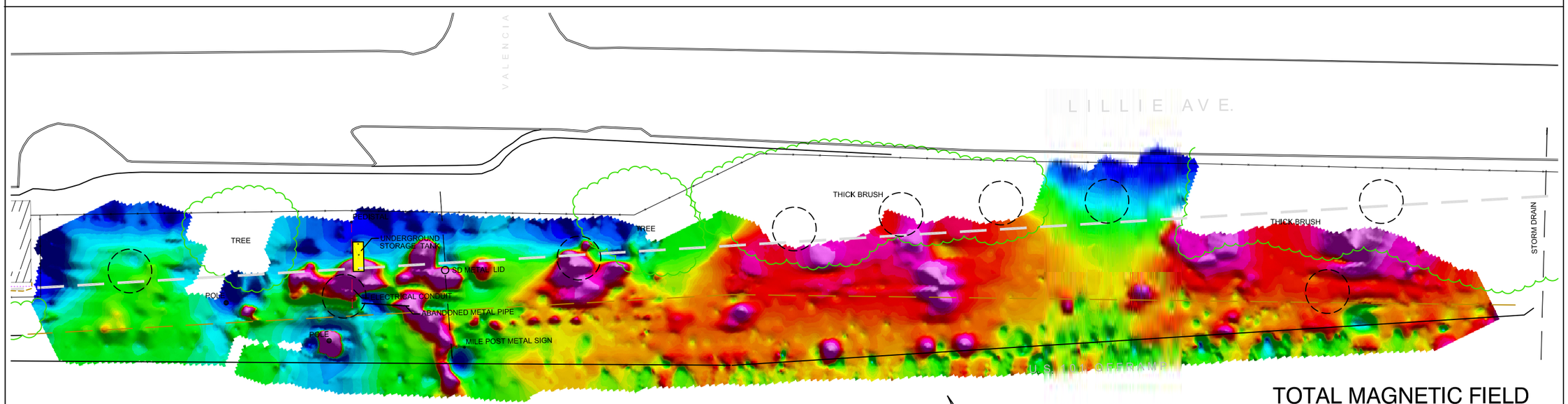
PROJECT #: 10-074-1CA

DATE: Dec 7, 2010 DRAWN BY: R. SMITH

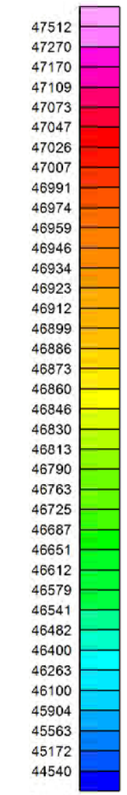
FIGURE 4



ANALYTIC SIGNAL



TOTAL MAGNETIC FIELD



TOTAL MAGNETIC FIELD (nT)

EXPLANATION

A-5 ANOMALY DESIGNATION

MAGNETOMETER SURVEY LINE

REPORTED WELL LOCATION (APPROX.)

METAL AREA ON ANALYTIC SIGNAL MAP

SOUND WALL LOCATION (APPROX.)

FEET

0 40 80

ADVANCED GEOLOGICAL SERVICES

GEOCON

1605 School Street
Suite 4
Moraga, CA 94556
(925) 631-1989

Magnetometer Survey Results
Historical Service Station Site

LOCATION: Summerland, Santa Barbara County, California

CLIENT: GEOCON Consultants, Inc.

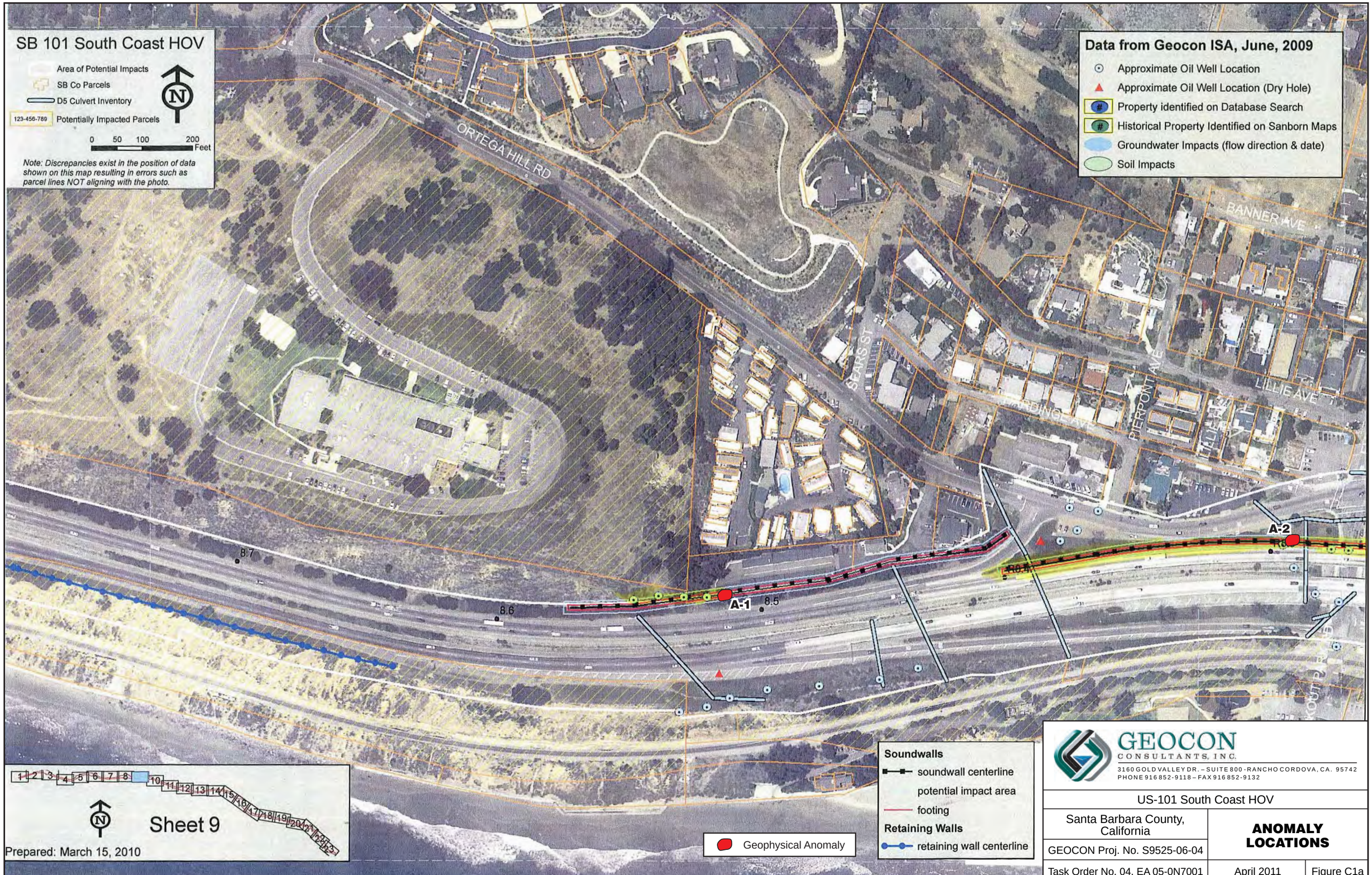
PROJECT #: 10-074-1CA

DATE: Dec 7, 2010

DRAWN BY: R. SMITH

FIGURE 5

APPENDIX C



GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DR. – SUITE 800 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 – FAX 916 852-9132

US-101 South Coast HOV

Santa Barbara County, California

GEOCON Proj. No. S9525-06-04

ANOMALY LOCATIONS

Task Order No. 04, EA 05-0N7001 | April 2011 | Figure C1a

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DR. – SUITE 800 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 – FAX 916 852-9132

US-101 South Coast HOV		
Santa Barbara County, California	**ANOMALY LOCATIONS**	
GEOCON Proj. No. S9525-06-04		
Task Order No. 04, EA 05-0N7001	April 2011	Figure C1b

N

0 250

APPROX. SCALE: feet

GEOCON CONSULTANTS, INC.

6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

US-101 South Coast HOV

Santa Barbara, California

ANOMALY LOCATIONS

GEOCON Proj. No. S9525-06-04 | April 2011 | Figure C2

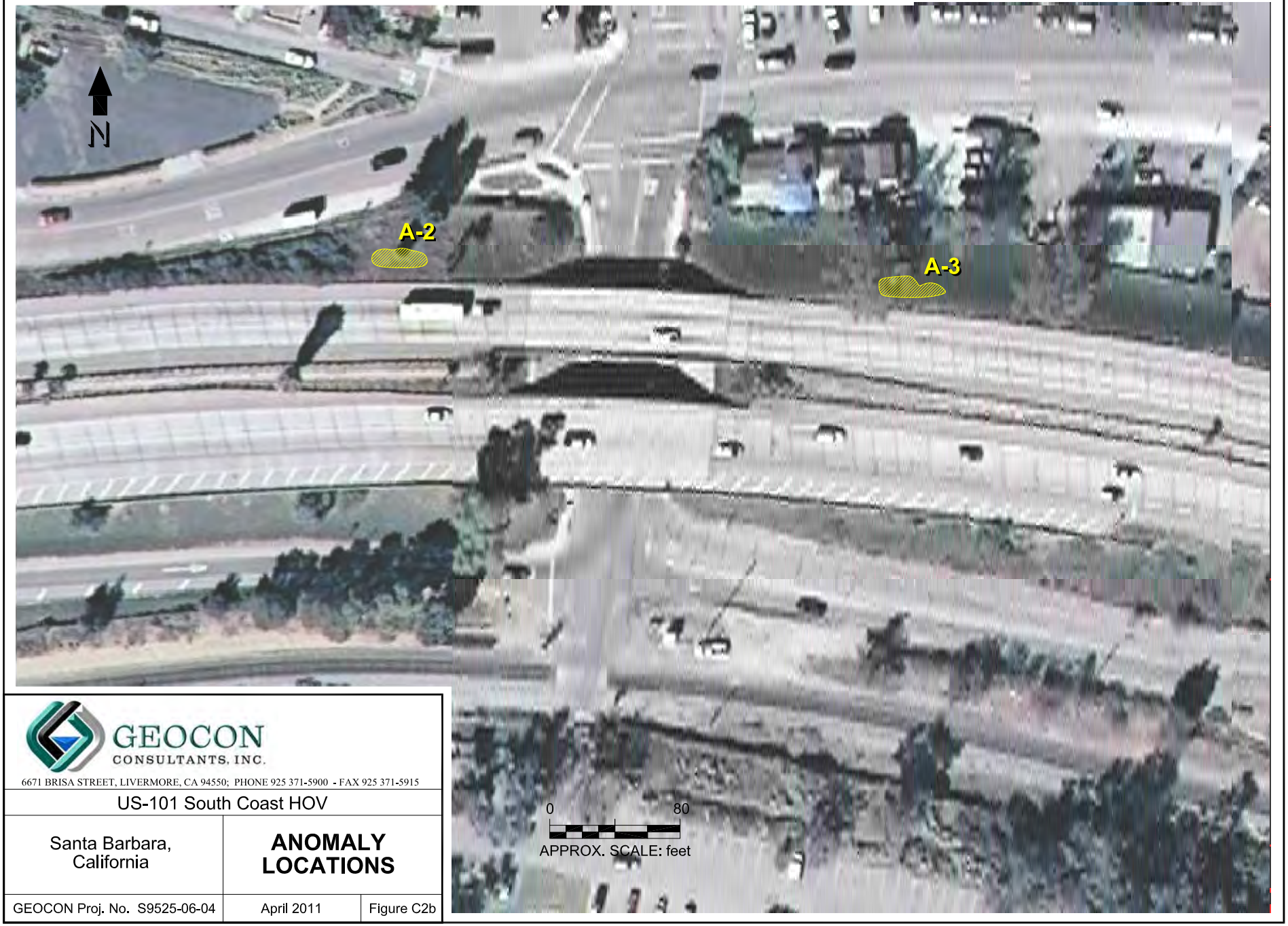
SITE0311

GEOCON CONSULTANTS, INC.
6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

US-101 South Coast HOV

Santa Barbara, California	**ANOMALY LOCATIONS**	
GEOCON Proj. No. S9525-06-04	April 2011	Figure C2a

SITE0311



GEOCON
CONSULTANTS, INC.
6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

US-101 South Coast HOV

Santa Barbara, California	**ANOMALY LOCATIONS**	
GEOCON Proj. No. S9525-06-04	April 2011	Figure C2b

SITE0311

GEOCON CONSULTANTS, INC.

6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

US-101 South Coast HOV

Santa Barbara, California	**ANOMALY LOCATIONS**	
GEOCON Proj. No. S9525-06-04	April 2011	Figure C2c

SITE0311

APPENDIX D

December 01, 2010

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196

Chris Giuntoli, Chris Merritt
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

TEL: (925) 371-5900
FAX: (925) 371-5915

Workorder No.: 114791

RE: SB 101 HOV LANES, S9525-06-04

Attention: Chris Giuntoli, Chris Merritt

Enclosed are the results for sample(s) received on November 18, 2010 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *01-Dec-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	TANK 1
Lab Order:	114791	**Collection Date:**	11/16/2010 12:00:00 PM
Project:	SB 101 HOV LANES, S9525-06-04	**Matrix:**	WATER
Lab ID:	114791-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
			EPA 8260B			
RunID: MS2_101119A	QC Batch:	Q10VW225		PrepDate:		Analyst: **SLL**
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2,3-Trichlorobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2,4-Trichlorobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2-Dibromo-3-chloropropane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2-Dichlorobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
2-Chlorotoluene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
4-Chlorotoluene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Benzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Bromobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Bromodichloromethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Bromoform	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Bromomethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Carbon tetrachloride	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Chlorobenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Chloroethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Chloroform	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Chloromethane	0.61	0.50		µg/L	1	11/19/2010 01:43 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	11/19/2010 01:43 PM

Qualifiers:

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

ANALYTICAL RESULTS

Print Date: *01-Dec-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	TANK 1
Lab Order:	114791	**Collection Date:**	11/16/2010 12:00:00 PM
Project:	SB 101 HOV LANES, S9525-06-04	**Matrix:**	WATER
Lab ID:	114791-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
			EPA 8260B			
RunID: MS2_101119A	QC Batch:	Q10VW225		PrepDate:		Analyst: **SLL**
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Di-isopropyl ether	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Dibromochloromethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Dibromomethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Ethyl tert-butyl ether	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Ethylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Isopropylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
m,p-Xylene	ND	1.0		µg/L	1	11/19/2010 01:43 PM
Methylene chloride	ND	1.0		µg/L	1	11/19/2010 01:43 PM
MTBE	ND	0.50		µg/L	1	11/19/2010 01:43 PM
n-Butylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
n-Propylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Naphthalene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
o-Xylene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
sec-Butylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Styrene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Tert-amyl methyl ether	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Tert-Butanol	ND	10		µg/L	1	11/19/2010 01:43 PM
tert-Butylbenzene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Tetrachloroethene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Toluene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Trichloroethene	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Vinyl chloride	ND	0.50		µg/L	1	11/19/2010 01:43 PM
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%REC	1	11/19/2010 01:43 PM
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	1	11/19/2010 01:43 PM
Surr: Dibromofluoromethane	97.3	70-130		%REC	1	11/19/2010 01:43 PM
Surr: Toluene-d8	93.8	70-130		%REC	1	11/19/2010 01:43 PM

Qualifiers:

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

ANALYTICAL RESULTS

Print Date: *01-Dec-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	TANK 1
Lab Order:	114791	**Collection Date:**	11/16/2010 12:00:00 PM
Project:	SB 101 HOV LANES, S9525-06-04	**Matrix:**	WATER
Lab ID:	114791-001B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID						
			EPA 8015B(M)			
RunID: GC19_101119A	QC Batch: M10VW153			PrepDate:		Analyst: **DDL**
GRO	ND	0.050		mg/L	1	11/19/2010 03:35 PM
Surr: Bromofluorobenzene (FID)	91.1	70-130		%REC	1	11/19/2010 03:35 PM

Qualifiers:				
	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

ANALYTICAL RESULTS

Print Date: *01-Dec-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	TANK 1
Lab Order:	114791	**Collection Date:**	11/16/2010 12:00:00 PM
Project:	SB 101 HOV LANES, S9525-06-04	**Matrix:**	WATER
Lab ID:	114791-001C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3010A			**EPA 6010B**		
RunID: ICP8_101122A	QC Batch: 68302			PrepDate: 11/19/2010		Analyst: **SRB**
Antimony	ND	0.0050		mg/L	1	11/22/2010 11:12 AM
Arsenic	ND	0.010		mg/L	1	11/22/2010 11:12 AM
Barium	0.10	0.0030		mg/L	1	11/22/2010 11:12 AM
Beryllium	ND	0.0030		mg/L	1	11/22/2010 11:12 AM
Cadmium	ND	0.0030		mg/L	1	11/22/2010 11:12 AM
Chromium	ND	0.0030		mg/L	1	11/22/2010 11:12 AM
Cobalt	ND	0.0030		mg/L	1	11/22/2010 11:12 AM
Copper	ND	0.0050		mg/L	1	11/22/2010 11:12 AM
Lead	0.028	0.0050		mg/L	1	11/22/2010 11:12 AM
Molybdenum	ND	0.0050		mg/L	1	11/22/2010 11:12 AM
Nickel	ND	0.0050		mg/L	1	11/22/2010 11:12 AM
Selenium	ND	0.010		mg/L	1	11/22/2010 11:12 AM
Silver	ND	0.0030		mg/L	1	11/22/2010 11:12 AM
Thallium	ND	0.015		mg/L	1	11/22/2010 11:12 AM
Vanadium	ND	0.0030		mg/L	1	11/22/2010 11:12 AM
Zinc	0.047	0.010		mg/L	1	11/22/2010 11:12 AM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7470A		
RunID: AA5_101123A	QC Batch: 68336			PrepDate: 11/22/2010		Analyst: **IL**
Mercury	ND	0.20		µg/L	1	11/23/2010 10:12 AM

Qualifiers:

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

ANALYTICAL RESULTS

Print Date: *01-Dec-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	TANK 1
Lab Order:	114791	**Collection Date:**	11/16/2010 12:00:00 PM
Project:	SB 101 HOV LANES, S9525-06-04	**Matrix:**	WATER
Lab ID:	114791-001D		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B(M)**		
RunID: GC16_101122D	QC Batch: 68341			PrepDate:	11/22/2010	Analyst: **CBR**
DRO	1.7	0.050		mg/L	1	11/22/2010 11:15 AM
ORO	2.3	0.050		mg/L	1	11/22/2010 11:15 AM
Surr: p-Terphenyl	66.1	36-126		%REC	1	11/22/2010 11:15 AM

Qualifiers:

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

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_W

Sample ID: **MB-68302** SampType: **MBLK** TestCode: **6010_W** Units: **mg/L** Prep Date: **11/19/2010** RunNo: **126993**
Client ID: **PBW** Batch ID: **68302** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **11/22/2010** SeqNo: **2048873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0050									
Arsenic	ND	0.010									
Barium	ND	0.0030									
Beryllium	ND	0.0030									
Cadmium	ND	0.0030									
Chromium	ND	0.0030									
Cobalt	ND	0.0030									
Copper	ND	0.0050									
Lead	ND	0.0050									
Molybdenum	ND	0.0050									
Nickel	ND	0.0050									
Selenium	ND	0.010									
Silver	ND	0.0030									
Thallium	ND	0.015									
Vanadium	ND	0.0030									
Zinc	0.005	0.010									

Sample ID: **LCS-68302** SampType: **LCS** TestCode: **6010_W** Units: **mg/L** Prep Date: **11/19/2010** RunNo: **126993**
Client ID: **LCSW** Batch ID: **68302** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **11/22/2010** SeqNo: **2048874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.943	0.0050	1.000	0	94.3	85	115				
Arsenic	0.920	0.010	1.000	0	92.0	85	115				
Barium	0.947	0.0030	1.000	0	94.7	85	115				
Beryllium	0.949	0.0030	1.000	0	94.9	85	115				
Cadmium	0.922	0.0030	1.000	0	92.2	85	115				
Chromium	0.857	0.0030	1.000	0	85.7	85	115				
Cobalt	0.933	0.0030	1.000	0	93.3	85	115				

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_W

Sample ID: **LCS-68302** SampType: **LCS** TestCode: **6010_W** Units: **mg/L** Prep Date: **11/19/2010** RunNo: **126993**
Client ID: **LCSW** Batch ID: **68302** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **11/22/2010** SeqNo: **2048874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.932	0.0050	1.000	0	93.2	85	115				
Lead	0.932	0.0050	1.000	0	93.2	85	115				
Molybdenum	0.935	0.0050	1.000	0	93.5	85	115				
Nickel	0.922	0.0050	1.000	0	92.2	85	115				
Selenium	0.913	0.010	1.000	0	91.3	85	115				
Silver	0.956	0.0030	1.000	0	95.6	85	115				
Thallium	0.903	0.015	1.000	0	90.3	85	115				
Vanadium	0.921	0.0030	1.000	0	92.1	85	115				
Zinc	0.923	0.010	1.000	0.005473	91.7	85	115				

Sample ID: **114791-001C-MS** SampType: **MS** TestCode: **6010_W** Units: **mg/L** Prep Date: **11/19/2010** RunNo: **126993**
Client ID: **TANK 1** Batch ID: **68302** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **11/22/2010** SeqNo: **2048878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.379	0.0050	2.500	0	95.1	73	128				
Arsenic	2.270	0.010	2.500	0	90.8	79	121				
Barium	2.376	0.0030	2.500	0.1022	90.9	82	118				
Beryllium	2.342	0.0030	2.500	0	93.7	84	119				
Cadmium	2.205	0.0030	2.500	0.0009638	88.2	79	117				
Chromium	2.147	0.0030	2.500	0	85.9	78	115				
Cobalt	2.227	0.0030	2.500	0	89.1	80	118				
Copper	2.397	0.0050	2.500	0	95.9	81	127				
Lead	2.252	0.0050	2.500	0.02813	88.9	80	118				
Molybdenum	2.287	0.0050	2.500	0	91.5	81	118				
Nickel	2.207	0.0050	2.500	0	88.3	78	120				
Selenium	2.286	0.010	2.500	0	91.5	78	120				
Silver	2.459	0.0030	2.500	0	98.4	79	125				
Thallium	2.188	0.015	2.500	0	87.5	74	115				
Vanadium	2.323	0.0030	2.500	0	92.9	84	119				
Zinc	2.230	0.010	2.500	0.04740	87.3	75	122				

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_W

Sample ID: **114791-001C-MSD** SampType: **MSD** TestCode: **6010_W** Units: **mg/L** Prep Date: **11/19/2010** RunNo: **126993**
Client ID: **TANK 1** Batch ID: **68302** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **11/22/2010** SeqNo: **2048879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.357	0.0050	2.500	0	94.3	73	128	2.379	0.921	20	
Arsenic	2.238	0.010	2.500	0	89.5	79	121	2.270	1.41	20	
Barium	2.348	0.0030	2.500	0.1022	89.8	82	118	2.376	1.16	20	
Beryllium	2.307	0.0030	2.500	0	92.3	84	119	2.342	1.53	20	
Cadmium	2.183	0.0030	2.500	0.0009638	87.3	79	117	2.205	1.01	20	
Chromium	2.115	0.0030	2.500	0	84.6	78	115	2.147	1.49	20	
Cobalt	2.203	0.0030	2.500	0	88.1	80	118	2.227	1.11	20	
Copper	2.364	0.0050	2.500	0	94.6	81	127	2.397	1.37	20	
Lead	2.226	0.0050	2.500	0.02813	87.9	80	118	2.252	1.15	20	
Molybdenum	2.258	0.0050	2.500	0	90.3	81	118	2.287	1.26	20	
Nickel	2.179	0.0050	2.500	0	87.2	78	120	2.207	1.27	20	
Selenium	2.254	0.010	2.500	0	90.2	78	120	2.286	1.44	20	
Silver	2.423	0.0030	2.500	0	96.9	79	125	2.459	1.46	20	
Thallium	2.171	0.015	2.500	0	86.9	74	115	2.188	0.772	20	
Vanadium	2.290	0.0030	2.500	0	91.6	84	119	2.323	1.44	20	
Zinc	2.207	0.010	2.500	0.04740	86.4	75	122	2.230	1.04	20	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W

Sample ID: **MB-68336** SampType: **MBLK** TestCode: **7470_W** Units: **µg/L** Prep Date: **11/22/2010** RunNo: **127030**
Client ID: **PBW** Batch ID: **68336** TestNo: **EPA 7470A** Analysis Date: **11/23/2010** SeqNo: **2049540**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: **LCS-68336** SampType: **LCS** TestCode: **7470_W** Units: **µg/L** Prep Date: **11/22/2010** RunNo: **127030**
Client ID: **LCSW** Batch ID: **68336** TestNo: **EPA 7470A** Analysis Date: **11/23/2010** SeqNo: **2049541**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.028	0.20	10.00	0	100	85	115				

Sample ID: **114791-001C-MS** SampType: **MS** TestCode: **7470_W** Units: **µg/L** Prep Date: **11/22/2010** RunNo: **127030**
Client ID: **TANK 1** Batch ID: **68336** TestNo: **EPA 7470A** Analysis Date: **11/23/2010** SeqNo: **2049542**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.413	0.20	10.00	0	94.1	70	130				

Sample ID: **114791-001C-MSD** SampType: **MSD** TestCode: **7470_W** Units: **µg/L** Prep Date: **11/22/2010** RunNo: **127030**
Client ID: **TANK 1** Batch ID: **68336** TestNo: **EPA 7470A** Analysis Date: **11/23/2010** SeqNo: **2049543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.398	0.20	10.00	0	94.0	70	130	9.413	0.163	20	

Sample ID: **114791-001C-DUP** SampType: **DUP** TestCode: **7470_W** Units: **µg/L** Prep Date: **11/22/2010** RunNo: **127030**
Client ID: **TANK 1** Batch ID: **68336** TestNo: **EPA 7470A** Analysis Date: **11/23/2010** SeqNo: **2049545**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20						0	0	20	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_LL

Sample ID: **MB-68341** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **mg/L** Prep Date: **11/22/2010** RunNo: **127043**
Client ID: **PBW** Batch ID: **68341** TestNo: **EPA 8015B(M EPA 3510C** Analysis Date: **11/22/2010** SeqNo: **2049763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	0.050									
ORO	ND	0.050									
Surr: p-Terphenyl	0.059		0.08000		73.6	36	126				

Sample ID: **LCS-68341** SampType: **LCS** TestCode: **8015_W_DM_** Units: **mg/L** Prep Date: **11/22/2010** RunNo: **127043**
Client ID: **LCSW** Batch ID: **68341** TestNo: **EPA 8015B(M EPA 3510C** Analysis Date: **11/22/2010** SeqNo: **2049764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	0.956	0.050	1.000	0	95.6	52	128				
Surr: p-Terphenyl	0.062		0.08000		78.0	36	126				

Sample ID: **MB-68341MS** SampType: **MS** TestCode: **8015_W_DM_** Units: **mg/L** Prep Date: **11/22/2010** RunNo: **127043**
Client ID: **ZZZZZZ** Batch ID: **68341** TestNo: **EPA 8015B(M EPA 3510C** Analysis Date: **11/22/2010** SeqNo: **2049765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	0.958	0.050	1.000	0	95.8	52	128				
Surr: p-Terphenyl	0.061		0.08000		76.2	36	126				

Sample ID: **MB-68341MSD** SampType: **MSD** TestCode: **8015_W_DM_** Units: **mg/L** Prep Date: **11/22/2010** RunNo: **127043**
Client ID: **ZZZZZZ** Batch ID: **68341** TestNo: **EPA 8015B(M EPA 3510C** Analysis Date: **11/22/2010** SeqNo: **2049766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	0.811	0.050	1.000	0	81.1	52	128	0.9579	16.7	20	
Surr: p-Terphenyl	0.053		0.08000		65.6	36	126		0	0	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GP LL

Sample ID: **M101119LCS2** SampType: **LCS** TestCode: **8015_W_GP** Units: **mg/L** Prep Date: RunNo: **127056**
Client ID: **LCSW** Batch ID: **M10VW153** TestNo: **EPA 8015B(M** Analysis Date: **11/19/2010** SeqNo: **2050120**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.995	0.050	1.000	0	99.5	70	130				
Surr: Bromofluorobenzene (FID)	99.729		100.0		99.7	70	130				

Sample ID: **M101119MB1MS** SampType: **MS** TestCode: **8015_W_GP** Units: **mg/L** Prep Date: RunNo: **127056**
Client ID: **ZZZZZZ** Batch ID: **M10VW153** TestNo: **EPA 8015B(M** Analysis Date: **11/19/2010** SeqNo: **2050121**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.953	0.050	1.000	0	95.3	70	130				
Surr: Bromofluorobenzene (FID)	98.817		100.0		98.8	70	130				

Sample ID: **M101119MB1MSD** SampType: **MSD** TestCode: **8015_W_GP** Units: **mg/L** Prep Date: RunNo: **127056**
Client ID: **ZZZZZZ** Batch ID: **M10VW153** TestNo: **EPA 8015B(M** Analysis Date: **11/19/2010** SeqNo: **2050122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.987	0.050	1.000	0	98.7	70	130	0.9530	3.51	20	
Surr: Bromofluorobenzene (FID)	100.142		100.0		100	70	130		0	0	

Sample ID: **M101119MB1** SampType: **MBLK** TestCode: **8015_W_GP** Units: **mg/L** Prep Date: RunNo: **127056**
Client ID: **PBW** Batch ID: **M10VW153** TestNo: **EPA 8015B(M** Analysis Date: **11/19/2010** SeqNo: **2050123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.050									
Surr: Bromofluorobenzene (FID)	96.049		100.0		96.0	70	130				

Sample ID: **114807-016BDUP** SampType: **DUP** TestCode: **8015_W_GP** Units: **mg/L** Prep Date: RunNo: **127056**
Client ID: **ZZZZZZ** Batch ID: **M10VW153** TestNo: **EPA 8015B(M** Analysis Date: **11/19/2010** SeqNo: **2050125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	0.050						0	0	20	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GP LL

Sample ID: **114807-016BDUP** SampType: **DUP** TestCode: **8015_W_GP** Units: **mg/L** Prep Date: RunNo: **127056**
Client ID: **ZZZZZZ** Batch ID: **M10VW153** TestNo: **EPA 8015B(M** Analysis Date: **11/19/2010** SeqNo: **2050125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	96.437		100.0		96.4	70	130		0	0	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **Q101119LCS1** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **LCSW** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048554**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22.060	0.50	20.00	0	110	70	130				
Benzene	44.430	0.50	40.00	0	111	70	130				
Chlorobenzene	22.560	0.50	20.00	0	113	70	130				
MTBE	19.320	0.50	20.00	0	96.6	70	130				
Toluene	43.510	0.50	40.00	0	109	70	130				
Trichloroethene	22.590	0.50	20.00	0	113	70	130				
Surr: 1,2-Dichloroethane-d4	23.250		25.00		93.0	70	130				
Surr: 4-Bromofluorobenzene	24.860		25.00		99.4	70	130				
Surr: Dibromofluoromethane	24.740		25.00		99.0	70	130				
Surr: Toluene-d8	24.370		25.00		97.5	70	130				

Sample ID: **Q101119MB2MS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **ZZZZZZ** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048555**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21.230	0.50	20.00	0	106	70	130				
Benzene	41.790	0.50	40.00	0	104	70	130				
Chlorobenzene	21.150	0.50	20.00	0	106	70	130				
MTBE	17.820	0.50	20.00	0	89.1	70	130				
Toluene	41.050	0.50	40.00	0	103	70	130				
Trichloroethene	21.410	0.50	20.00	0	107	70	130				
Surr: 1,2-Dichloroethane-d4	21.950		25.00		87.8	70	130				
Surr: 4-Bromofluorobenzene	23.510		25.00		94.0	70	130				
Surr: Dibromofluoromethane	23.060		25.00		92.2	70	130				
Surr: Toluene-d8	23.100		25.00		92.4	70	130				

Sample ID: **Q101119MB2MSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **ZZZZZZ** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **Q101119MB2MSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **ZZZZZZ** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20.860	0.50	20.00	0	104	70	130	21.23	1.76	20	
Benzene	41.900	0.50	40.00	0	105	70	130	41.79	0.263	20	
Chlorobenzene	21.350	0.50	20.00	0	107	70	130	21.15	0.941	20	
MTBE	19.380	0.50	20.00	0	96.9	70	130	17.82	8.39	20	
Toluene	40.920	0.50	40.00	0	102	70	130	41.05	0.317	20	
Trichloroethene	21.260	0.50	20.00	0	106	70	130	21.41	0.703	20	
Surr: 1,2-Dichloroethane-d4	24.080		25.00		96.3	70	130		0	0	
Surr: 4-Bromofluorobenzene	25.240		25.00		101	70	130		0	0	
Surr: Dibromofluoromethane	24.690		25.00		98.8	70	130		0	0	
Surr: Toluene-d8	24.530		25.00		98.1	70	130		0	0	

Sample ID: **Q101119MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **PBW** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
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Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **Q101119MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **PBW** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Di-isopropyl ether	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethyl tert-butyl ether	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **Q101119MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **PBW** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	1.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
Tert-amyl methyl ether	ND	0.50									
Tert-Butanol	ND	10									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.270		25.00		101	70	130				
Surr: 4-Bromofluorobenzene	29.120		25.00		116	70	130				
Surr: Dibromofluoromethane	28.110		25.00		112	70	130				
Surr: Toluene-d8	28.430		25.00		114	70	130				

Sample ID: **114791-001A** SampType: **DUP** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **TANK 1** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,1-Trichloroethane	ND	0.50						0	0	20	
1,1,2,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,2-Trichloroethane	ND	0.50						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **114791-001A** SampType: **DUP** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **TANK 1** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50						0	0	20	
1,1-Dichloroethene	ND	0.50						0	0	20	
1,1-Dichloropropene	ND	0.50						0	0	20	
1,2,3-Trichlorobenzene	ND	0.50						0	0	20	
1,2,3-Trichloropropane	ND	0.50						0	0	20	
1,2,4-Trichlorobenzene	ND	0.50						0	0	20	
1,2,4-Trimethylbenzene	ND	0.50						0	0	20	
1,2-Dibromo-3-chloropropane	ND	0.50						0	0	20	
1,2-Dibromoethane	ND	0.50						0	0	20	
1,2-Dichlorobenzene	ND	0.50						0	0	20	
1,2-Dichloroethane	ND	0.50						0	0	20	
1,2-Dichloropropane	ND	0.50						0	0	20	
1,3,5-Trimethylbenzene	ND	0.50						0	0	20	
1,3-Dichlorobenzene	ND	0.50						0	0	20	
1,3-Dichloropropane	ND	0.50						0	0	20	
1,4-Dichlorobenzene	ND	0.50						0	0	20	
2,2-Dichloropropane	ND	0.50						0	0	20	
2-Butanone	ND	10						0	0	20	
2-Chloroethyl vinyl ether	ND	0.50						0	0	20	
2-Chlorotoluene	ND	0.50						0	0	20	
2-Hexanone	ND	10						0	0	20	
4-Chlorotoluene	ND	0.50						0	0	20	
4-Isopropyltoluene	ND	0.50						0	0	20	
4-Methyl-2-pentanone	ND	10						0	0	20	
Acetone	ND	10						0	0	20	
Acrolein	ND	10						0	0	20	
Acrylonitrile	ND	10						0	0	20	
Benzene	ND	0.50						0	0	20	
Bromobenzene	ND	0.50						0	0	20	
Bromochloromethane	ND	0.50						0	0	20	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **114791-001A** SampType: **DUP** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **TANK 1** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	0.50						0	0	20	
Bromoform	ND	0.50						0	0	20	
Bromomethane	ND	0.50						0	0	20	
Carbon disulfide	ND	2.0						0	0	20	
Carbon tetrachloride	ND	0.50						0	0	20	
Chlorobenzene	ND	0.50						0	0	20	
Chloroethane	ND	0.50						0	0	20	
Chloroform	ND	0.50						0	0	20	
Chloromethane	0.500	0.50						0.6100	19.8	20	
cis-1,2-Dichloroethene	ND	0.50						0	0	20	
cis-1,3-Dichloropropene	ND	0.50						0	0	20	
Cyclohexanone	ND	50						0	0	20	
Di-isopropyl ether	ND	0.50						0	0	20	
Dibromochloromethane	ND	0.50						0	0	20	
Dibromomethane	ND	0.50						0	0	20	
Dichlorodifluoromethane	ND	0.50						0	0	20	
Ethyl Acetate	ND	10						0	0	20	
Ethyl Ether	ND	10						0	0	20	
Ethyl tert-butyl ether	ND	0.50						0	0	20	
Ethylbenzene	ND	0.50						0	0	20	
Freon-113	ND	0.50						0	0	20	
Hexachlorobutadiene	ND	0.50						0	0	20	
Iodomethane	ND	0.50						0	0	20	
Isopropylbenzene	ND	0.50						0	0	20	
m,p-Xylene	ND	1.0						0	0	20	
Methylene chloride	ND	1.0						0	0	20	
MTBE	ND	0.50						0	0	20	
n-Butylbenzene	ND	0.50						0	0	20	
n-Propylbenzene	ND	0.50						0	0	20	
Naphthalene	ND	0.50						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 114791
Project: SB 101 HOV LANES, S9525-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: **114791-001A** SampType: **DUP** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **126974**
Client ID: **TANK 1** Batch ID: **Q10VW225** TestNo: **EPA 8260B** Analysis Date: **11/19/2010** SeqNo: **2048561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.50						0	0	20	
sec-Butylbenzene	ND	0.50						0	0	20	
Styrene	ND	0.50						0	0	20	
Tert-amyl methyl ether	ND	0.50						0	0	20	
Tert-Butanol	ND	10						0	0	20	
tert-Butylbenzene	ND	0.50						0	0	20	
Tetrachloroethene	ND	0.50						0	0	20	
Toluene	ND	0.50						0	0	20	
trans-1,2-Dichloroethene	ND	0.50						0	0	20	
trans-1,3-Dichloropropene	ND	0.50						0	0	20	
Trichloroethene	ND	0.50						0	0	20	
Trichlorofluoromethane	ND	0.50						0	0	20	
Vinyl acetate	ND	10						0	0	20	
Vinyl chloride	ND	0.50						0	0	20	
Xylenes, Total	ND	1.5						0	0	20	
Surr: 1,2-Dichloroethane-d4	23.090		25.00		92.4	70	130		0	20	
Surr: 4-Bromofluorobenzene	23.150		25.00		92.6	70	130		0	20	
Surr: Dibromofluoromethane	23.720		25.00		94.9	70	130		0	20	
Surr: Toluene-d8	22.530		25.00		90.1	70	130		0	20	

Qualifiers:

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	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#:

Logged By: Date: 11/18/10

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FEDEX ☐ Other: GSO

Sample Condition Upon Receipt 4-8

1. CHILLED Y☑ N☐
2. HEADSPACE (VOA) Y☐ N☑
3. CONTAINER INTACT Y☑ N☐
4. SEALED Y☐ N☑
5. # OF SPLS MATCH COC Y☑ N☐
6. PRESERVED Y☑ N☑

Client: GEOCON CONSULTANTS, INC.
Address: 6671 Brisa Street
City: Livermore State: CA Zip Code: 94550
TEL: (925) 371-5900
FAX: (925) 371-5915

Attn: CHRIS GIUNTOLI, CHRIS MERRITT, LIVERMORE

Project Name: SB 101 HOV LANES
Project #: 59525-06-04
Sampler: (Printed Name) C. MERRITT (Signature) CHRIS MERRITT

Relinquished by: (Signature and Printed Name) CHRIS MERRITT Date: 11-17-10 Time: 1730
Received by: (Signature and Printed Name) Margo Date: 11/18/10 Time: 9:00
Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: CM 11-17-10
Print Name Date
CM
Signature

Send Report To:
Attn:
Co: SAME AS ABOVE
Address
City State Zip

Bill To:
Attn:
Co: SAME AS ABOVE
Address
City State Zip

Special Instructions/Comments:

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☐ SWRCB ☐ Logcode OTHER

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) BTEX	8015B (DRO) + MO	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	114791-01	TANK 1	11-16-10	1200			X			X	X		X		X			STD	7	4 G P, 2 HCl	9/14/10	

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report Yellow to folder Pink to submitter

Diane Galvan

From: Chris Giuntoli [giuntoli@geoconinc.com]
Sent: Wednesday, December 01, 2010 10:50 AM
To: Diane Galvan
Subject: RE: Lab Order 114791

Hi Diane,

If the data is available from the original 8260 and was within hold time, please reissue the lab report with the fuel oxygenates included.

Thanks,
Chris

From: Diane Galvan [mailto:diane@atlglobal.com]
Sent: Wednesday, December 01, 2010 10:10 AM
To: Chris Giuntoli
Subject: RE: Lab Order 114791

Hi Chris,

We may be able to report them from the 8260 analysis we already did. Let me know if you need them and I can have the supervisor reprocess it.

Diane

From: Chris Giuntoli [mailto:giuntoli@geoconinc.com]
Sent: Wednesday, December 01, 2010 9:00 AM
To: Diane Galvan
Subject: Lab Order 114791

Hi Diane,

Can you check to see if you have sufficient sample to run fuel oxygenates for the water sample submitted under Lab Order 114791. Based on the sample date, looks like we passed 14 days yesterday, though the client may still want to run the analyses. Please let me know.

Thanks,
Chris

Fire Department

"Serving the community since 1926"

HEADQUARTERS

4410 Cathedral Oaks Road
Santa Barbara, CA 93110-1042
(805) 681-5500 FAX: (805) 681-5553

Michael W. Dyer
Fire Chief
County Fire
Warden

Christian J. Hahn
Deputy Fire Chief

June 12, 2012

Mr. James Tkach
Caltrans District 5
50 Higuera Street
San Luis Obispo, CA 93401

UNDERGROUND STORAGE TANK REMOVAL (PROJECT NO. S9690-06-01), AT SOUTH COAST 101 HOV LANE PROJECT, SUMMERLAND, CA

Dear Mr. Tkach:

The purpose of this letter is to confirm the removal of a 1,000-gallon underground storage tank used for the storage of petroleum at the above referenced site on May 10, 2012. The tank is identified as a steel single wall tank, removed under Permit # MTS-4758.

Based on review of the UST Removal and Closure Report provided by GEOCON Consultants Inc., dated May 24, 2012, it has been determined that soil samples collected from the underground storage tank excavation and soil pile did not contain contamination at levels above current Santa Barbara County Leaking Underground Fuel Tank (LUFT) Investigation Levels. Please be advised that errors in the verification process can be made. Any hazardous material contamination found at the site in the future must be properly reported, assessed and mitigated by the property owner, persons responsible for the soil contamination, and/or other responsible parties. With the provision that the information provided to this agency is accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future conditions at the site. Nor does it relieve you of the responsibility to clean up existing, additional, or previously unidentified conditions at the site, which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

If you have any questions regarding this notice, you may contact me at (805) 686-8143.

Steve Mattern

Steve Mattern
Supervising Hazardous Materials Specialist
Certified Unified Program Agency