ENVIRONMENTAL ASSESSMENT SUMMARY
REMEDIAL ACTION PLAN

FREE PRODUCT AREA

NEWPORT BANNING RANCH
ORANGE COUNTY, CALIFORNIA

Prepared for:

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ENVIRONMENTAL ASSESSMENT SUMMARY
REMEDIAL ACTION PLAN

1. INTRODUCTION

1.1 Report and Project Objectives

In early 2001, West Newport Oil Company (WNOC) initiated a proactive, site-wide Environmental Assessment (EA) of its Newport Banning Ranch (NBR) oil production property. This was part of a continuing program by WNOC and the property owners to assess impacts to the property from the oil production operations. This EA combined results from previous site investigations with comprehensive new testing, which included the collection of data on soil and groundwater quality at several areas of Potential Environmental Concern (referred to as PECs). As a result of these investigations an area of crude oil free product (free product) was identified in the subsurface at the Main Site Tank Farm area (PEC #02). WNOC initiated remedial action immediately upon finding this condition in August 2001, and continues this operation to the present.

The objective of this report is to summarize the results of investigation activities focused on the Free Product Area, summarize the remedial actions already taken, and to present the Remedial Action Plan (RAP) for future work. The Free Product Area was identified as part of a larger environmental assessment performed at the NBR in May through August 2001. Subsequent investigations of the free product area were conducted in July, August, and November 2002. The results of the Main Site Tank Farm and related Free Product Area investigation were initially summarized in the Environmental Assessment document (EA document) [GeoSyntec, 2001a] that was submitted to the Santa Ana Regional Water Quality Control Board (RWQCB). It should be noted that this report is intended to only address the assessment and remedial actions associated with the Free Product Area. Other previously identified impacts related to the Main Site Tank Farm will be addressed as part of a site-wide RAP associated with the oil field "end of life" abandonment (i.e., when oil production ceases).

This report has been prepared by GeoSyntec Consultants (GeoSyntec) on behalf of the site owners and the site operator, West Newport Oil Company (WNOC).

1.2 Background and Project Overview

The NBR site covers approximately 400 acres and is located east of the mouth of the Santa Ana River near the Huntington Beach – Newport Beach city boundary in Orange County, California (Figure 1-1). The NBR is currently operated as a crude oil and natural gas production facility by the WNOC.

The site assessment history is described in the Summary Report [GeoSyntec, 2001b], as well as the EA document [GeoSyntec, 2001a]. These reports are incorporated by reference. Although certain information is included in this document for background purposes, details within these documents are not repeated here.

Previous environmental assessments conducted at the site have identified areas of the NBR that may require further investigation

Figure 1-1: Site Map

and/or remedial action. These areas were designated as areas of Potential Environmental Concern (PECs) due to potential soil or groundwater quality impacts at the site. The Free Product Area is located adjacent to the Main Site Tank Farm and was included in the 2001 assessments performed at the Tank Farm. Further investigation has identified the Free Product Area to be located within a corner of a former sump. The sump was reportedly abandoned by pumping out a majority of the contents and filling with soil. Based on the environmental assessment of this area, sufficient free product remained in the subsurface to allow it to accumulate on the water table, and subsequently migrate to groundwater monitoring wells installed within the former sump area. The method used for closing the sump has apparently allowed an area of crude oil free product to remain at depth within the southern boundaries of the former sump.

To evaluate the Free Product Area, data on soil and groundwater quality were collected to:

- characterize the nature and extent of the free product;
- evaluate groundwater quality in the vicinity of the Free Product Area; and
- develop a remedial action approach.

1.3 Report Organization

The information collected during the investigation of the Free Product Area and the RAP are presented in this report. The remainder of this report is organized into the following sections:

- Section 2 – Assessment, presents a summary of the activities that were conducted to characterize the Free Product Area and evaluate localized groundwater quality;

- Section 3 – Initial Remedial Action, discusses the actions that WNOC took immediately upon finding the Free Product and the status of those actions at present; and

- Section 4 – Remedial Action Plan, (RAP) presents the remedial alternative selected to address the identified free product and related impacts to groundwater quality.

Tables and figures are included in the body of the text and at the end of the report.

2. ASSESSMENT

2.1 Summary

As part of the EA [GeoSyntec, 2001a] conducted in May through August 2001, soil and groundwater quality was evaluated at the Main Site Tank Farm both through visual observation and laboratory testing. Results of these investigations identified the Free Product Area. Subsequent review of historic records identified evidence of a former sump in the Free Product Area, as evident in a 1973 aerial photograph. Investigations of free product and groundwater quality performed in the former sump area consisted of:

- Test pitting and sampling within and around the limits of the former sump area;
- Installation and sampling of two groundwater monitoring wells (where free product has been observed); and
- Installation and sampling of four temporary groundwater wells around the perimeter of the Free Product Area (i.e., sentinel monitoring wells where no free product has been observed).

The test pitting/trenching activities identified the lateral boundaries of the former sump. Sample analysis of the free product confirmed the presence of crude oil, similar in signature to that found in other parts of the NBR. Visual observations from test pits and the installed wells indicate that the free product is estimated to be limited to an area of approximately one-third of an acre at the southern end of the former sump. Laboratory testing of the free product indicate a weathered crude oil signature with an absence of lighter weight, more soluble hydrocarbons (i.e., hydrocarbons less than C9). Data collected from the surrounding groundwater monitoring wells indicate a limited zone of dissolved phase hydrocarbon type impacts likely related to the free product. The field procedures and results are further described in the following sections.

2.2 Investigation Procedures

Several previous site assessments/investigations have been performed at the NBR since 1986. To develop the investigation program for the Free Product Area, GeoSyntec reviewed previous site investigation data, discussed the sump closure procedure with on-site personnel, and identified the likely areas of potential environmental concern within the area. The area of investigation is shown in Figure 2-1.

Review of historical site information identified the presence of a former sump in the Free Product Area, as depicted in a 1973 aerial photograph (Figure 2-2). The extent of the Free Product Area was investigated through visual observations from test pits and wells installed within the former sump area. The chemical nature of the free product was evaluated through laboratory testing of free product samples from the wells. As part of the EA [GeoSyntec, 2001a], test pits were initially excavated and one well (02-GW-002) was installed in the southern sump area in May of 2001. In July and August 2002, additional test pits were excavated in and around the former sump area and one-additional free product monitoring well (02-GW-006) was installed. A total of 86 test pits were excavated in the Main Site Tank Farm area over the course of both phases of the investigation. Figure 2-1 presents the locations where test pits were excavated and the free product

monitoring wells (02-GW-002 and 02-GW-006) were installed. Test pit logs are included in Appendix A. Table 2-1 includes well installation details.

Over the course of both phases of the investigation, samples of free product were collected for laboratory testing. The laboratory-testing program was designed to provide information on the chemical nature of the free product. Table 2-2 includes a listing of the laboratory tests that were performed on samples of free product collected from the wells.

Groundwater quality in the vicinity of the Free Product Area was investigated through installation and sampling of four temporary groundwater wells. These four groundwater wells were installed and sampled concurrent with the EA in June of 2001. Figure 2-1 includes the location of these groundwater wells (02-GW-001, 02-GW-003, 02-GW-004, and 02-GW-005). Table 2-1 includes well installation details. Following installation, samples were collected from the groundwater wells to evaluate the potential for groundwater impacts due to groundwater contact with the free product. Table 2-3 includes a listing of the laboratory tests that were performed on the groundwater samples.

PEC*	Well	TD (ft)	Screen (ft)
02	02-GW-001	18	8-18
	02-GW-002	18	8-18
	02-GW-003	18	8-18
	02-GW-004	18	8-18
	02-GW-005	18	8-18
	02-GW-006	18	8-18

Table 2-1:Groundwater and Free Product Well Details

Total Recoverable Petroleum Hydrocarbon (TRPH)
TPH - Carbon Chain
Volatile Organics
Semi-Volatile Organics
Title 22 – Metals

Table 2-2: Free Product Laboratory Testing

General Minerals
Title 22 Metals
Paths
SVOCs
VOCs
TRPH
TPH Diesel and Crude Oil

Table 2-3: Groundwater Laboratory Testing

2.3 Discussion of Findings

2.3.1 Free Product

In the Free Product Area, the test pits were excavated to varying depths of 6 ft to 18 ft below ground surface (bgs). Test pit depths were established based on visual and olfactory observations and PID readings of impacted material were collected as the test pits were excavated. A majority of the test pits were excavated to provide a lateral delineation of the free product and the former sump area. Depth of test pitting was limited by the groundwater saturated soil within the Lowlands. At the depth of the saturated soil, test pits would remain open for short periods of time to allow for observation, then water and soil would subsequently flow into the test pits and the test pit would be backfilled. The data obtained from test pits identified the boundaries of the former sump, as shown in Figure 2-3.

The Free Product Area is estimated to be limited to an area of approximately one-third of an acre at the southern end of the former sump (Figure 2-3). The location where the free product was found is consistent with the 1973 aerial photograph and personnel descriptions of the methods of operation and closure. Discussions with on-site personnel identified that the sump was closed by first pumping out a majority of the sump contents. The sump was then reportedly backfilled with soils, working from the north end of the sump to the south end. This action of backfilling soils from the north to the south likely acted to "push" or concentrate residual sump material, which contained some free oil, into the southern end, leaving a concentrated area of free product within the matrix of backfill soil.

The soil matrix within certain parts of the former sump area is currently impacted by varying concentrations of oil, ranging from limited oil-impacted soil lenses to some oil existing as free product trapped within the soil matrix. Free product, or heavily impacted sump soils were first encountered in test pits at depths ranging from 2 to 6 feet below ground surface. Although test pits were excavated to depths of up to 18 feet bgs, identification of the lower boundary of the free product was difficult during test pit observations due to interferences with seeping groundwater and caving of soils from the sidewalls at depth. It should be noted that groundwater elevations at the NBR are known to fluctuate due to ocean tidal influence. Additional data on free product thickness and horizontal extent of impacts, as well as the tidal influence on groundwater elevation and gradient, will be gathered as part of the remedial action, discussed in Section 4.

Samples of free product were collected from the two free product wells for laboratory testing. Results of carbon chain analyses show that the free product has a signature of weathered crude oil (Figure 2-4). Hydrocarbon analyses from samples indicate an absence of light-weight hydrocarbon (less than C9) and a distribution (approximately 7 to 13 percent) of the total hydrocarbon mass detected amongst each of the hydrocarbon chain categories. A comparison of crude oil and total carbon chain results indicates that approximately 50 percent of the hydrocarbon mass is greater than C36, indicative of a highly weathered product. Laboratory data for Free Product samples is provided in Appendix B.

2.3.2 Groundwater

Groundwater quality in the vicinity of the Free Product Area was evaluated through laboratory testing of samples collected from the four groundwater monitoring wells in June of 2001. Table 2-4 presents a summary of inorganic groundwater sample results. Table 2-5 presents a summary of organic groundwater sample results. Laboratory data for groundwater samples is provided in Appendix B. Subsequent test pitting performed around the former sump area was also used to define the extents of impacted groundwater. Testing results and test pitting observations are further described in the following paragraphs.

Groundwater samples collected from each well indicate ocean tidal influence on shallow groundwater quality (i.e., a low quality, non-drinking water zone with elevated ion concentrations as compared to non-saline waters). As shown on Table 2-5, specific volatile organic compounds (VOCs) detected in groundwater wells at the Free Product Area include toluene, m/p-xylene, styrene, and methylene chloride (the latter two compounds are typical lab contaminants). None of the groundwater samples contained heavy metals or VOCs at concentrations above State of California Maximum Contaminant Levels (MCLs) for drinking water. However, groundwater samples did contain dissolved phase hydrocarbons at concentrations up to 26 parts

per million (ppm) as TPH crude oil in well 02-GW-003. However, it should be noted in Table 2-5, that Well 02-GW-003 was the only well tested for total hydrocarbons. Data gaps on groundwater quality will be addressed as part of remedial design investigation and remedial actions.

The nature of the localized impacts to groundwater is crude oil related. A limited amount of dissolved phase impacts exists outside of these highly-weathered oil containing soils. As discussed in Section 2.3.1, the free product was found to have an absence of light-weight, more soluble hydrocarbons (less than C9). Based on VOC data from the wells, the lateral extent of groundwater impacts appears to be localized to within a radius of approximately 100 to 150 feet beyond the former sump boundaries. The evidence for the localized area of impact is also supported by the fact that Well 02-GW-005 did not contain detectable concentrations of VOCs and that this well is located at approximately similar distances from the free product area as the other wells. In addition, as shown on Table 2-5, when VOCs were detected in a well, the detections included only one or two compounds and at concentrations below MCLs. The apparent local impact area is also significant based on the length of time since the sump was closed, over 20 years. This may indicate that very limited migration occurs (due to a variety of factors including characteristics of the crude oil, tidal influence, biological attenuation of product, and soil characteristics). Due to tidal influence on groundwater conditions at the NBR, uncertainties exist with respect to a dominant groundwater flow gradient and therefore plume elongation and geometry affected by advection. Additional data on tidal influence on groundwater elevations and gradient will be collected as part of the remedial action, discussed in Section 4.

3. INITIAL REMEDIAL ACTION

Upon observation of free product in the monitoring wells installed within the Main Site Tank Farm (02-GW-002, and 02-GW-006), WNOC initiated remedial action. Well 02-GW-002 was fitted with a pump in August 2001 and has been operated since that time to begin the removal of free product from the subsurface. Though the full extent of the Free Product Area was not yet known, four of the outer groundwater monitoring wells indicated the impact was limited. WNOC initiated Free Product extraction from Well 02-GW-002 to reduce further migration of the free product and to begin immediate remedial actions. The RWQCB was later notified of this approach and approved of the actions taken by WNOC.

Actions taken included:

- Conversion of the free-product monitoring well to a recovery well;
- Installation of a low-flow diaphragm pump in the recovery well; and
- Piping of discharge to the oil production facility oil-water separator.

The pump intake was set at approximately 6ft below surface of the water table and was manually operated on an intermittent basis. As of the date of this report, the volume of water/oil mixture pumped has been approximately 10,175 gallons, with 215 gallons of that volume being the amount of oil recovered.

4. REMEDIAL ACTION PLAN

4.1 Technical Approach

The identified Free Product and impacted groundwater area is located within an operating oil field dehydration facility containing numerous tanks, vessels, and pipelines. These facilities will cause some restrictions on the ultimate extent of remedial actions that can be taken in the short term due to the danger of destabilizing the soils around such structures. As the operating oil field production has been declining and other uses of the property are being evaluated, it is estimated that the remaining life of these facilities is limited within the next few years. With these considerations the RAP is being developed with both a short-term and long-term aspect.

The short-term aspect of the RAP will focus on the goal of more extensive assessment of the impacts, a secure containment of those impacts, and an expansion of the initial remedial actions to extract as much of the free product as possible. The longer-term aspect of the RAP will focus more on a phased remediation of the impacted sump materials down to the saturated soils, with a full soil remediation operation completed during the abandonment of the dehydration facility.

4.2 Short-Term Remedial Actions

4.2.1 General

The short-term remedial strategy for the Free Product Area at the NBR has been separated into specific remedial actions to address the free product itself and the area of impacted groundwater surrounding the area. As the free product has been identified as the source of identified groundwater impacts, primary actions of the short-term remedial action plan will focus on controlling and removing the free product. Actions to address the surrounding groundwater will include enhanced monitoring and evaluation of both contaminant chemistry and groundwater flow regime, while source control and removal are being conducted. Modifications may be proposed as additional data on groundwater and recovery of the free product is gathered through implementation of the work tasks specified in this RAP.

Clean closure, or total excavation of the free product area was not considered a viable short-term alternative due the access limitations and stability concerns posed by the existing tanks and other structures at the Main Site Tank Farm. Thus, the following sections present details of the short-term remedial actions to address the free product and groundwater.

4.2.2 Free Product Extraction

The selected remedial action for the free product consists of product removal with large diameter vertical wells installed within the southern end of the former sump boundary. Free product has been extracted from monitoring well GW-002 since August 2001. To date approximately 215 gallons of product has been removed from the one 4-inch diameter-monitoring well (02-GW-002). Continued free product extraction from additional larger diameter wells is proposed. Details of the Free Product extraction system include:

- Installation of three additional free product extraction wells in the approximate locations shown in Figure 3-1.

- Extraction wells will be constructed of 8-inch diameter, schedule 40 PVC to a total depth of approximately 30 feet bgs. It is estimated that extraction wells will be screened from depths of 10 to 25 feet bgs. Screen intervals and total well depths may be adjusted based on observed conditions during installation.

- Each extraction well will be equipped with an appropriate type of pump (pneumatic, skimmer, belt, etc).

- Extracted product will be pumped to a holding tank and dealt with in a similar manner as oil product that is produced from oil production wells at the site.

The goal of this phase is to more fully assess the impacted area, contain further migration, and expand to full area extraction of hydrocarbon free product. Because the extraction wells will intercept the water table, appropriate permits will be obtained prior to installation. Drill cuttings will be collected and either stored in the upland lined storage cell or treated in the Lowland biotreatment cell, depending on hydrocarbon concentrations. Extraction pumps will be operated either in a continuous or cycled mode depending on the rate of drawdown and associated recovery of oil product in the wells. The quantity of total volume of groundwater/free product and extracted product will be recorded on a monthly basis.

4.2.3 Enhanced Groundwater Monitoring

Given the limited lateral extent of impacts to groundwater surrounding the free product area it is proposed to perform continued monitoring and evaluation of groundwater quality as the free product source is extracted and controlled. Considering that the free product has likely been in contact with groundwater for at least 20 years there exists a limited aerial extent of groundwater impacts. This is likely due to the fact that the free product contains a low percentage of readily soluble components or that dissolved phase concentrations become attenuated within short distances from the source, possibly due to biological activity. Therefore, due to the limited extent of groundwater impacts it is proposed to enhance the groundwater monitoring well network around the free product area and perform routine monitoring at this time. Details of the enhanced groundwater monitoring program include:

- Installation of four additional groundwater monitoring wells at the locations shown in Figure 3-1. It should be noted that one well is proposed to be installed within the former sump area. This well will serve to confirm the absence or presence of extractable free product at the northern edge of the free product area.

- Monitoring wells will be constructed of 4-inch diameter, Schedule 40 PVC to a total depth of approximately 20 feet bgs. It is estimated that monitoring wells will be screened from depths of 8 to 18 feet bgs (similar to the previous wells installed).

- Perform periodic groundwater elevation measurements in wells for the purposes of further evaluating the affect that tidal change has on groundwater elevation and therefore flow gradient.

- Perform quarterly sampling of the groundwater wells. Each well will be sampled using a traditional three volume well purge using a non-dedicated sampling pump.

- The laboratory testing program will include the parameters listed in Table 3-1. Included on Table 3-1 are the parameters used to evaluate the potential degree of natural attenuation. The parameter list may change as additional data is collected.

Appropriate well permits will be obtained prior to installation. Drill cuttings will be collected and either stored in the upland lined storage cell or treated in the lowland biotreatment cell, depending on hydrocarbon concentrations. The following section provides information of documentation and reporting of collected data.

4.3 Long-Term Remedial Action

Implementation of the short-term remedial actions will not complete the remediation of soils and groundwater within the former sump area. Efficiency of free product removal using wells will likely decrease when the oil content within sump soils reaches field capacity. As previously stated, the Free Product and impacted groundwater area is located within an operating oil field dehydration facility containing numerous tanks, vessels, and pipelines. These facilities pose restrictions on the extent of remedial actions that can be taken in the short term due to the danger of destabilizing the soils around such structures. Further, as the operating oil field production has been declining and other uses of the property are being evaluated, it is estimated that the remaining life of the facilities located within the Main Site Tank Farm is limited within the next few years. Therefore, long-term remedial actions more appropriate for addressing the extent of impacted soils in the free product area, such as impacted soil excavation, will be undertaken after decommissioning of these facilities. Remedial methods for these impacted soils may include biotreatment, off-site disposal, or on-site thermal treatment.

Groundwater quality in the vicinity of the Free Product Area will be monitored as part of the short-term and long-term remedial actions. A re-evaluation of groundwater conditions will be performed at the time the Main Site Tank Farm facilities are decommissioned. At that time additional remedial actions may be proposed to address persistent groundwater impacts, if any.

Field:	Dissolves Oxygen
	Redox Potential
	RH
	Conductivity
	Temperature
Laboratory:	Dissolved Methane
	Nitrate / Nitrite
	Sulfate / Sulfide
	Alkalinity
	VOCs
	SVOCs
	TRPH
	Dissolved Iron (+2)

Table 3-1: Proposed Groundwater Monitoring Program
Free Product Area RAP

4.4 Documentation and Reporting

Results of the free product extraction system and monitoring well installation activities will be documented in an installation report. The installation repot will at a minimum contain:

- As-built diagrams for both types of wells;
- Extraction well pump specifications and piping diagrams; and
- Initial start-up assessment and performance data.

Quarterly monitoring reports will also be prepared for submittal to RWQCB to document performance of the free product extraction system and present a summary of groundwater monitoring activities and results.

4.5 Schedule

Based on the work tasks proposed in this RAP, the following schedule was established:

- Submittal of this Plan to RWQCB – 2 December 2002.
- Installation of free product extraction system – February 2003
- Installation of groundwater monitoring wells – March 2003
- First groundwater monitoring event – March 2003
- Quarterly Groundwater Monitoring thereafter according to the following schedule:
  - March;
  - June;
  - September; and
  - December.

Monitoring reports will be submitted approximately 60 days following each field sampling event. This schedule is dependent on the review and approval times needed by the RWQCB. The RWQCB will be notified of updates to the schedule, as work progresses.

TABLES

TABLE 2-4
SUMMARY OF GROUNDWATER SAMPLE RESULTS - INORGANICS
NEWPORT BANNING RANCH
(November 2001)

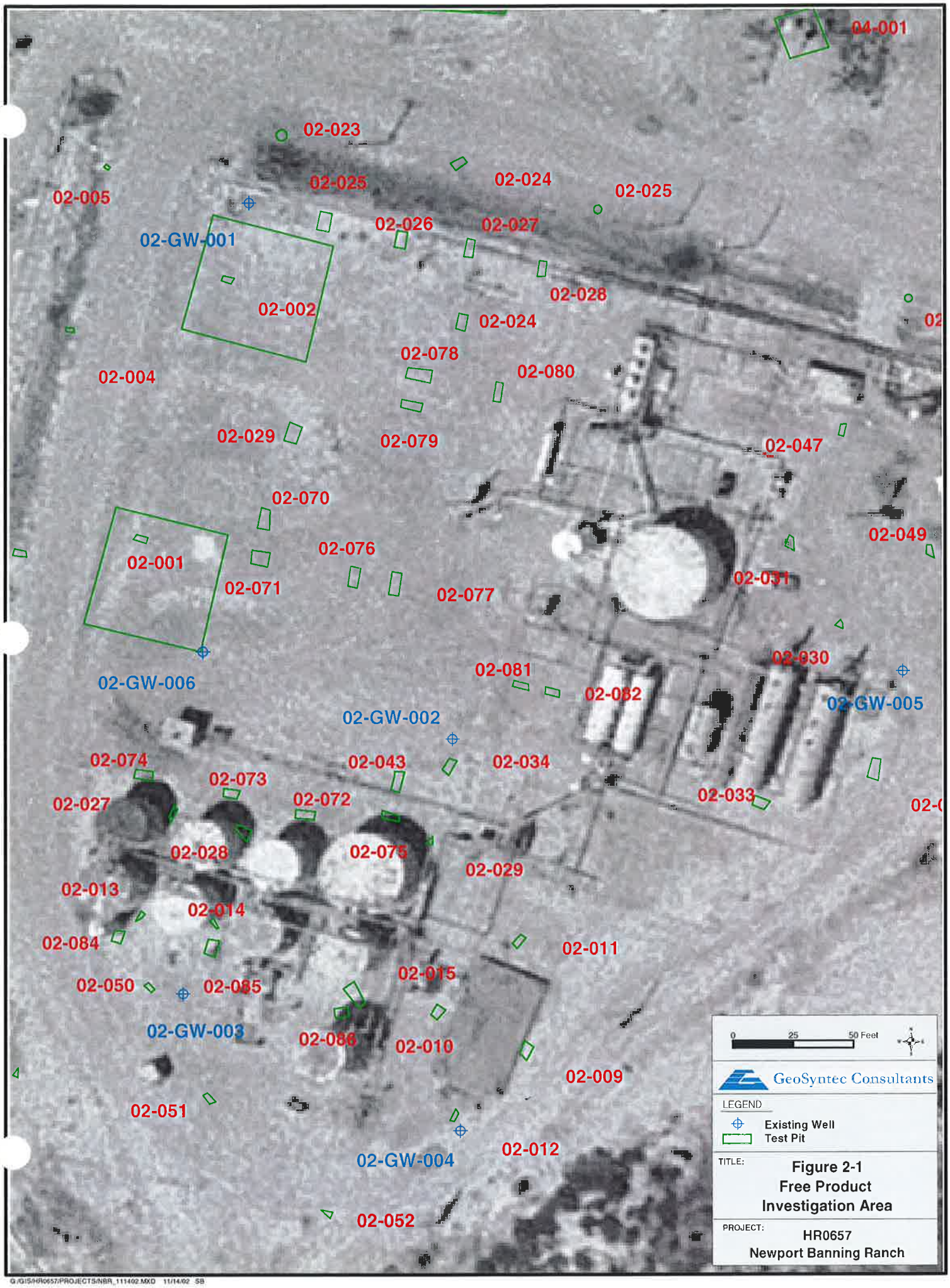
PEC	SAMPLE NUMBER	SAMPLE DATE	EPA 150.1	EPA 300.0			EPA 6000/7000											
			pH pH Units	Chloride mg/L	Nitrate-N mg/L	Sulfate mg/L	Barium mg/L	Calcium mg/L	Chromium (Total) mg/L	Copper mg/L	Iron mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Nickel mg/L	Sodium mg/L	Vanadium mg/L	Zinc mg/L
02	02-GW-001	06/09/2001	6.97	13000	ND	1200	0.279	434	0.00637	ND	8.09	754	1.6	0.025	0.00512	6230	0.00704	0.0661
	02-GW-001	06/26/2001	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	02-GW-003	06/09/2001	7.06	4000	ND	31	1.81	115	0.00911	ND	1.05	239	0.298	ND	ND	2780	0.0317	0.0682
	02-GW-003	06/27/2001	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	02-GW-004	06/11/2001	6.96	750	ND	380	0.107	93.8	ND	ND	ND	58.6	0.198	0.024	ND	746	-0.005	0.154
	02-GW-005	06/11/2001	6.86	1800	ND	290	0.0688	203	ND	ND	3.64	107	1.44	0.0567	0.0182	1350	-0.005	0.0242

* Figure excludes ND's

TABLE 2-5
SUMMARY OF GROUNDWATER SAMPLE RESULTS - ORGANICS
NEWPORT BANNING RANCH
(November 2001)

PEC	SAMPLE NUMBER	SAMPLE DATE	EPA 8015M		EPA 8260B							
			TPH as Diesel ug/L	TPH for Crude Oil ug/L	Benzene ug/L	C-1,2-Dichloroethene ug/L	Methylene Chloride ug/L	p/m Xylene ug/L	Styrene ug/L	t-1,2-Dichloroethene ug/L	Toluene ug/L	Vinyl Chloride ug/L
02	02-GW-001	06/09/2001	—	—	ND	ND	56	ND	ND	ND	ND	ND
	02-GW-001	06/26/2001	ND	ND	ND	ND	ND	ND	ND	ND	4.8	ND
	02-GW-003	06/09/2001	—	—	ND	ND	28	1.3	ND	ND	ND	ND
	02-GW-003	06/27/2001	2200	26000	ND	ND	ND	ND	ND	ND	1.1	ND
	02-GW-004	06/11/2001	—	—	ND	ND	91	ND	2.5	ND	ND	ND
	02-GW-005	06/11/2001	—	—	ND	ND	ND	ND	ND	ND	ND	ND

FIGURES



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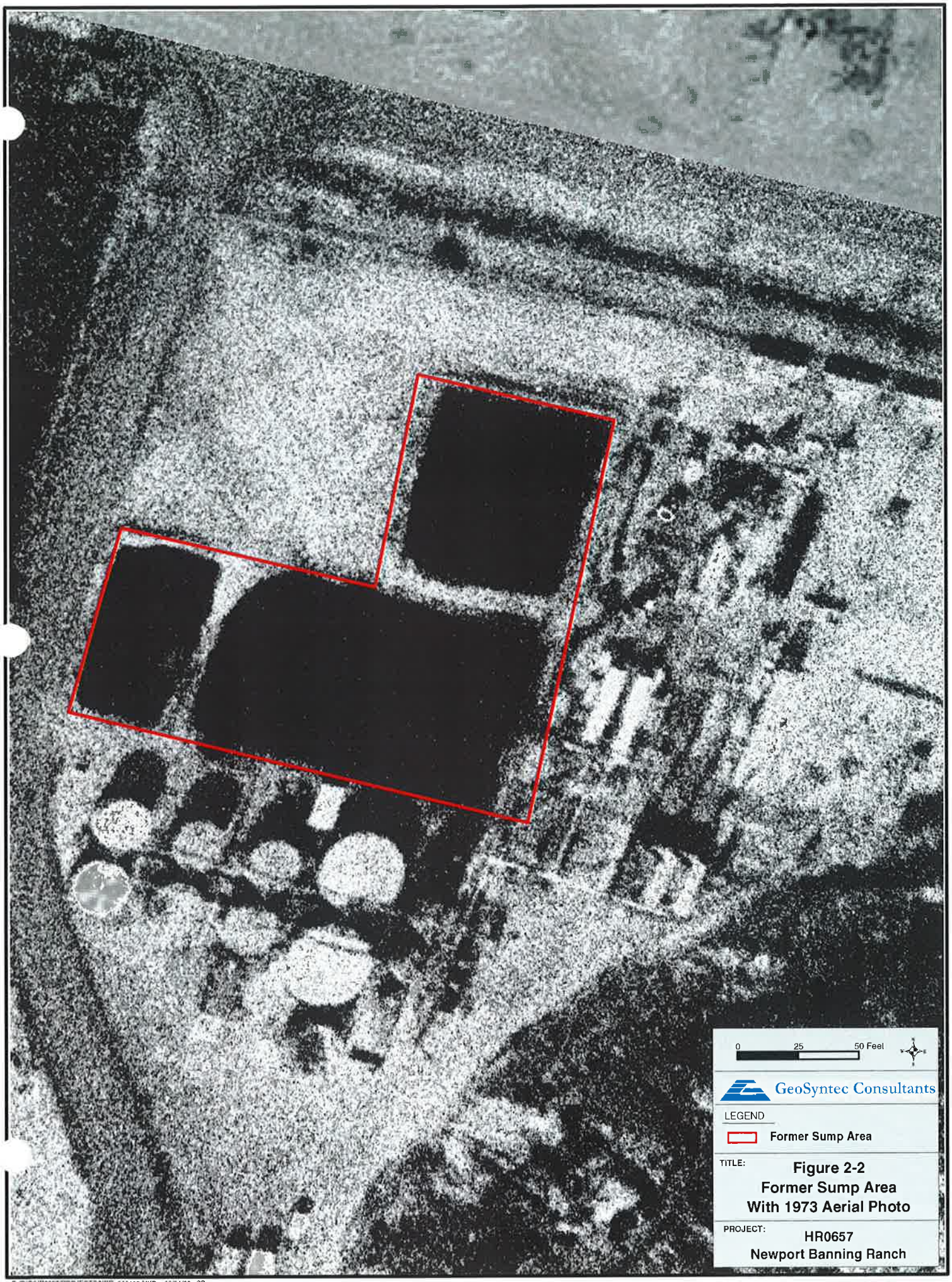

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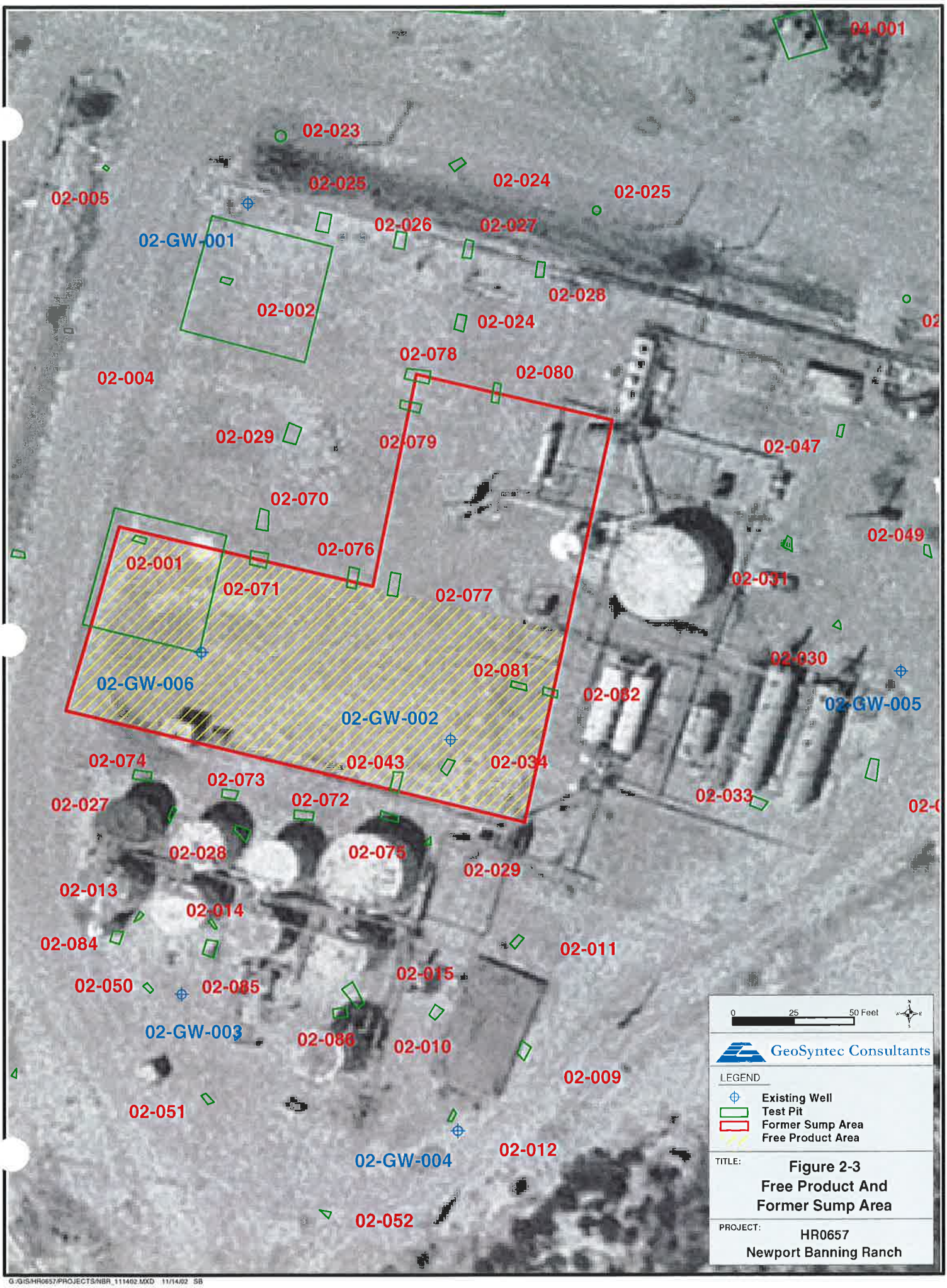

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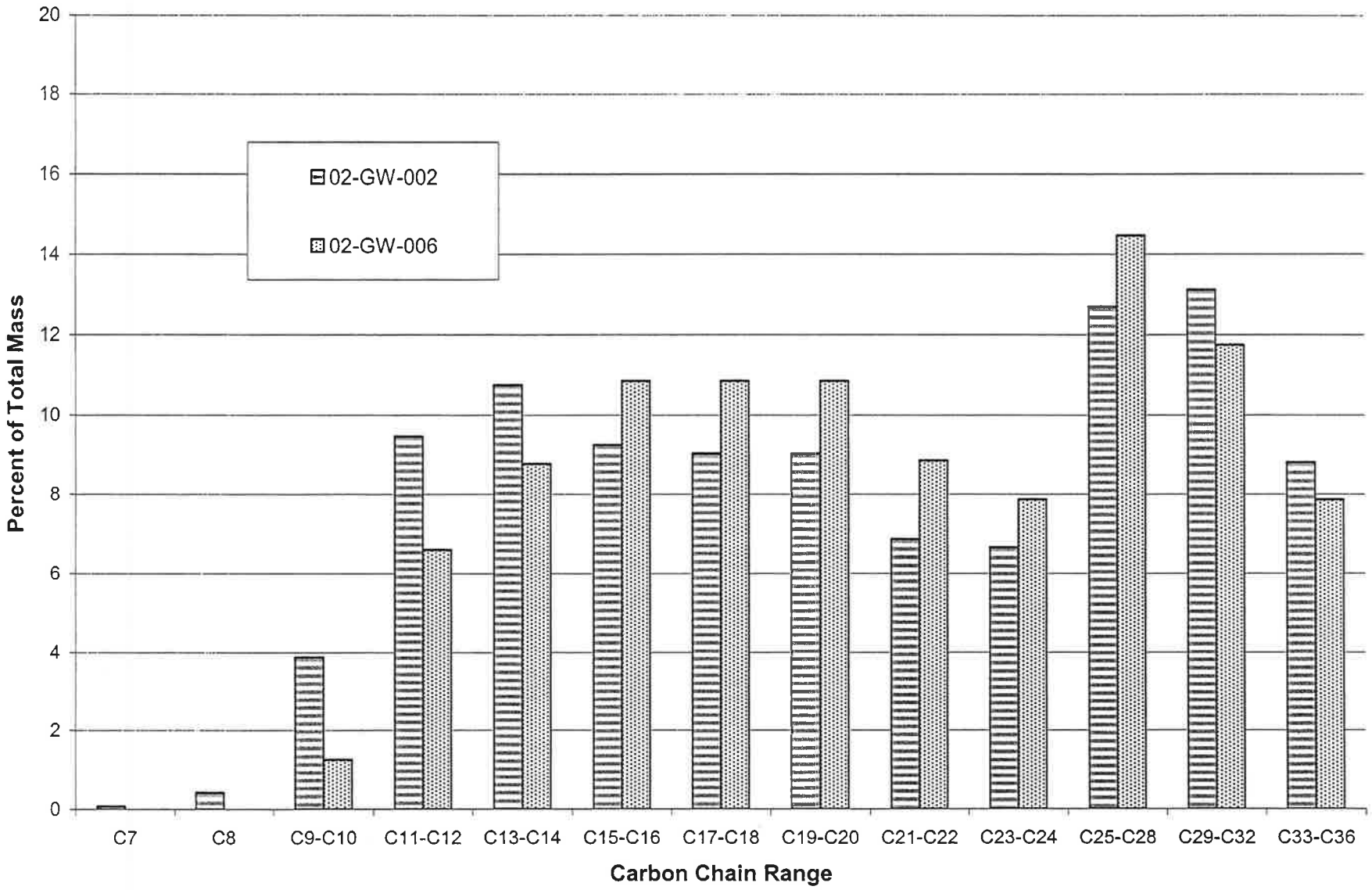
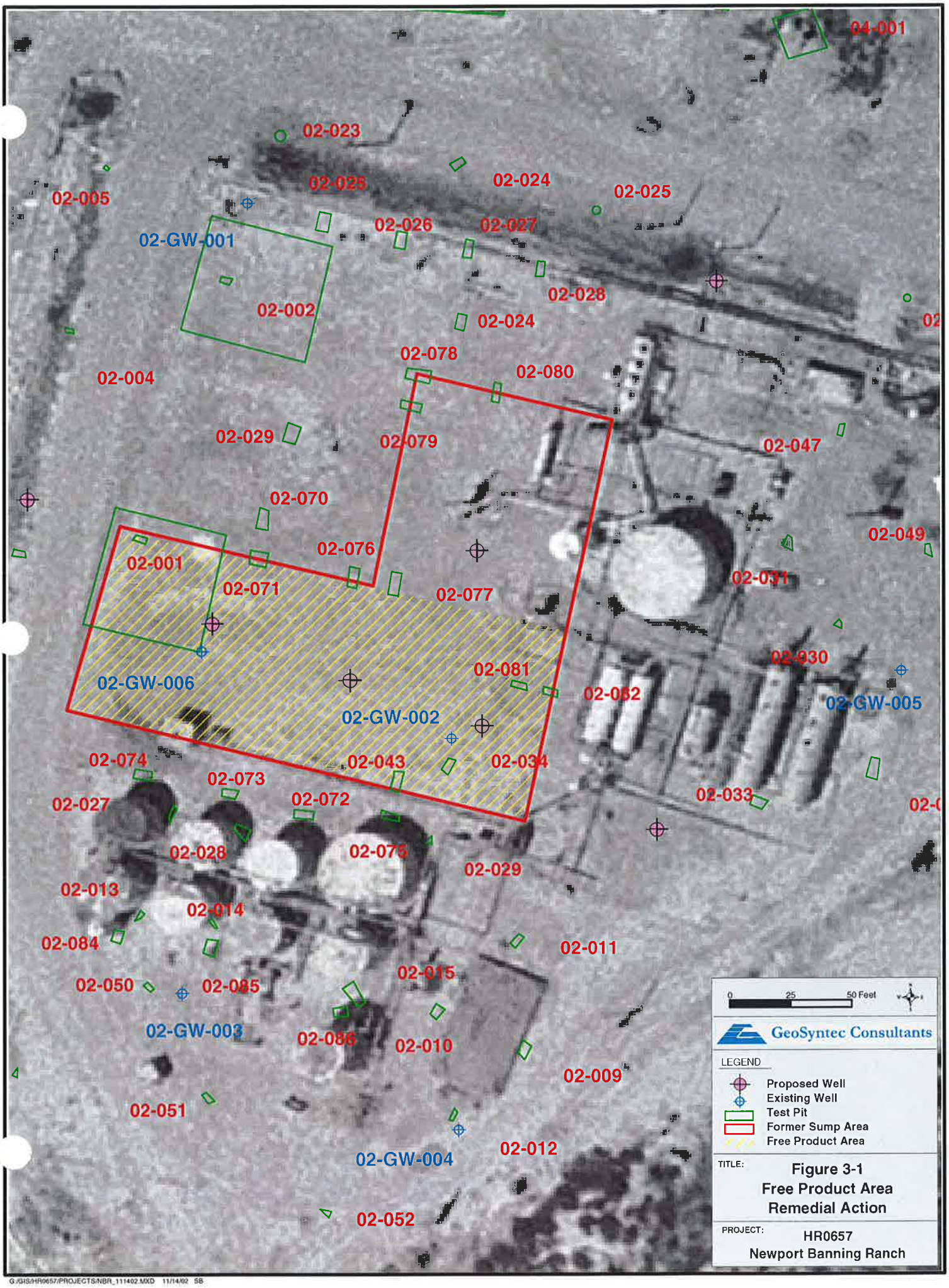
FIGURE 2-4
HYDROCARBON CHAIN SPECIATION
FREE PRODUCT SAMPLES





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APPENDIX A

TEST PIT LOGS

GeoSyntec Consultants
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-001	SHEET	1 OF 1
START DATE	May 22, 01	ELEVATION	FT
FINISH DATE	May 22, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Sandy Silt; Green	1		1	
	2		2	
	3		3	
Impacted Sandy Silt; Stained Black	4		4	
	5		5	
	6		6	Stopped digging because pit walls collapsed
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

IT NEWBAN.GPJ GEO_.GDT 9/14/01

GEOSYNTEC CONSULTANTS
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-002	SHEET	1 OF 1
START DATE	May 22, 01	ELEVATION	FT
FINISH DATE	May 22, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Sandy Fill; Dark Brown	1		1	
Sandy Fill; Yellow	2		2	
Impacted Sandy Fill; Stained Black				
Impacted Sandy Silt; Stained Black				
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	Confirmatory, bottom sample @ 9 ft; 02-SS-001-I
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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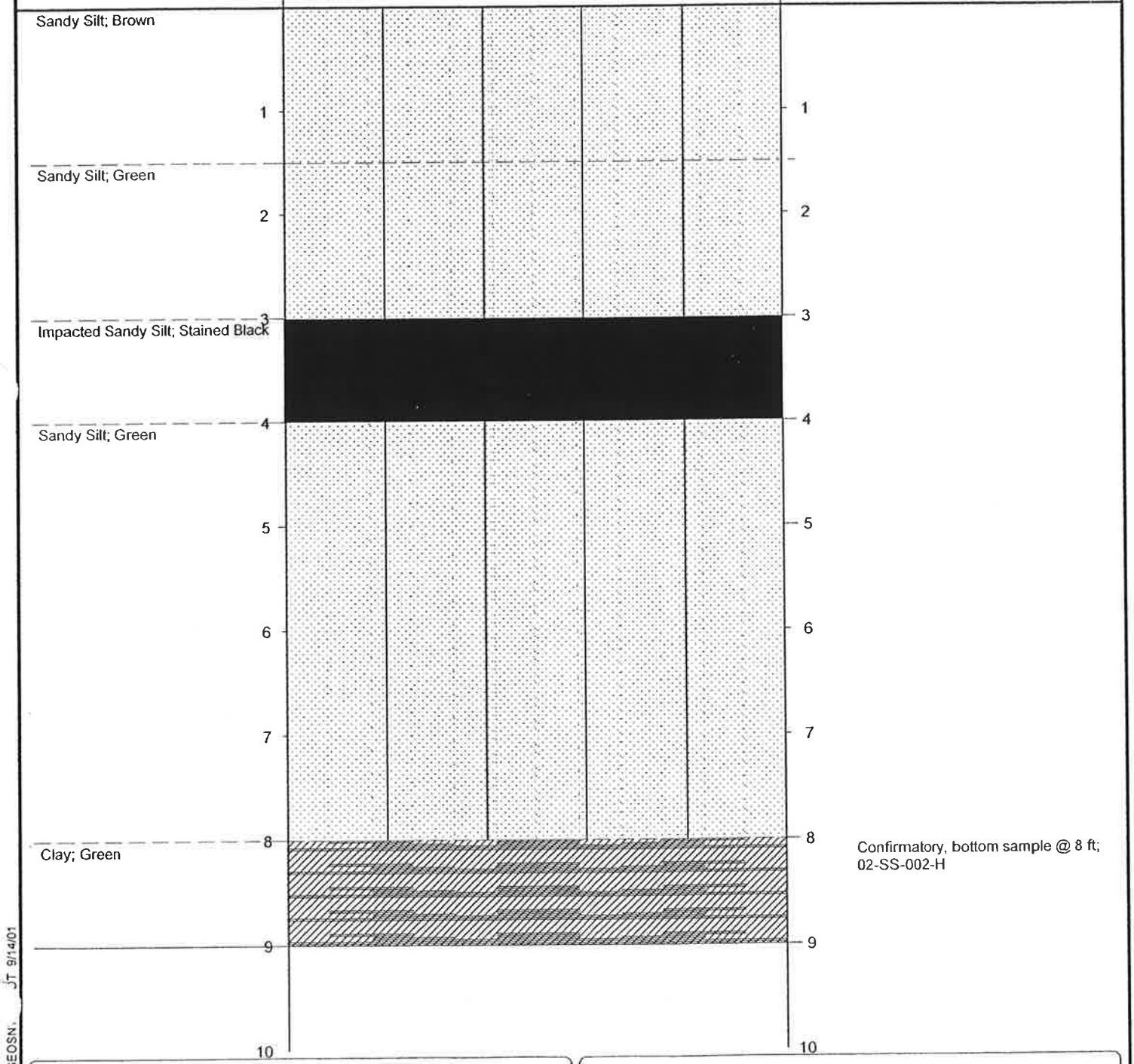
GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-003	SHEET	1 OF 1
START DATE	May 22, 01	ELEVATION	FT
FINISH DATE	May 22, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		



CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-004 SHEET 1 OF 1
START DATE May 22, 01 ELEVATION FT
FINISH DATE May 22, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Silty Clay; Green	1		1	
Impacted Silt and Clay; Stained Black	2		2	
Silty Clay; Green	3		3	
	4		4	
	5		5	
	6		6	
	7		7	Confirmatory, bottom sample @ 7 ft; 02-SS-003-G
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER
NORTHING
EASTING
ANGLE Vertical
BEARING ------
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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-005 SHEET 1 OF 1
START DATE May 22, 01 ELEVATION FT
FINISH DATE May 22, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
	1		1	
	2		2	
Impacted Sandy Silt, Stained Black	3		3	Hit a pipe at 3.5 ft, pit filled with water from the pipe
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-006	SHEET	1 OF 1
START DATE	May 22, 01	ELEVATION	FT
FINISH DATE	May 22, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
Impacted Sandy Silt; Stained Black				
Sand; Brown	2		2	
	3		3	
Sandy Silt; Green	4		4	
Impacted Sandy Silt; Stained Black	5		5	
Clay; Green				
	6		6	
Impacted Clay with Silt and Seashells; Oil entrained in Clay Matrix	7		7	
	8		8	
	9		9	Impacted sample @ 9 ft; 02-SS-004-I
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-007	SHEET	1 OF 1
START DATE	May 22, 01	ELEVATION	FT
FINISH DATE	May 22, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
Impacted Sandy Silt; Stained Black	3		3	
Clay; Green	4		4	
Silty Sand with Seashells; Green	5		5	
	6		6	
	7		7	Confirmatory, bottom sample @ 7 ft; 02-SS-005-G
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	-----
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-008	**SHEET**	1 OF 1
START DATE	May 22, 01	**ELEVATION**	FT
FINISH DATE	May 22, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt; Stained Black	1		1	
Clay; Green	2		2	
	3		3	
Silty Sand; Green				
	4		4	
	5		5	
	6		6	Confirmatory, bottom sample @ 6 ft; 02-SS-006-G
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

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GS FORM PIT 8/01

TEST PIT LOG

BORING	02-009	SHEET	1 OF 2
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Fill; Brown				Pit was located next to cinder block sump. Covering the outside of the sump wall was a black impacted layer, approximately 2-3 in thick.
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		-10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-009 SHEET 2 OF 2
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
	11		11	
	12		12	Confirmatory, boundary sample @ 12 ft; 02-SS-007-L
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING -----
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REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-010 SHEET 1 OF 1
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
ALM				
Silty Sand; Green				
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	Confirmatory, boundary sample @ 7 ft; 02-SS-008-G
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
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TEST PIT LOG

BORING	02-011		SHEET 1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt; Stained Black	1		1	
Sandy Fill; Brown	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
Sand; Green	7		7	Confirmatory, boundary sample @ 7 ft; 02-SS-009-G
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-012 SHEET 1 OF 2
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Fill; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-012	SHEET	2 OF 2
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Gravelly Sand	11		11	
	12		12	Confirmatory, boundary sample @ 12 ft; 02-SS-010-L
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-013	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
ALM				
Impacted Sandy Silt; Stained Black	1		1	
Sandy Fill; Brown	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	Confirmatory, bottom sample @ 9 ft; 02-SS-011-I
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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TEST PIT LOG

BORING 02-014 SHEET 1 OF 1
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
ALM				
	1		1	
Sandy Fill; Brown	2		2	
	3		3	Confirmatory sample @ 3 ft; 02-SS-012-C
	4		4	
	5		5	
	6		6	
	7		7	Confirmatory, bottom sample @ 7 ft; 02-SS-013-G
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
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GS FORM PIT 8/01

TEST PIT LOG

BORING 02-015 SHEET 1 OF 1
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Fill; Brown				
Impacted Gravel; Stained Black and Oily				
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	Confirmatory, bottom sample @ 9 ft; 02-SS-014-I
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-016	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
Impacted Sandy Silt; Stained Black	3		3	
	4		4	
Impacted Sandy Silt with Clay; Grey	5		5	
	6		6	
	7		7	
Sandy Silt with Seashells; Grey	8		8	Confirmatory, bottom sample @ 8 ft; 02-SS-015-H
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-017		**SHEET** 1 OF 1
START DATE	May 23, 01	**ELEVATION**	FT
FINISH DATE	May 23, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	0		0	
	1		1	
	2		2	
Impacted Sandy Silt; Stained Black	3		3	
Impacted Silty Sand; Grey	4		4	
Silty Sand; Grey	5		5	
	6		6	Confirmatory, bottom sample @ 6 ft; 02-SS-016-F
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	**02-018**		**SHEET 1 OF 1**
START DATE	May 23, 01	**ELEVATION**	FT
FINISH DATE	May 23, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
Impacted Sandy Silt; Stained Black	2		2	
Clay; Grey	3		3	
Impacted Silty Sand; Grey	4		4	
	5		5	
Silty Sand; Grey	6		6	Confirmatory, bottom sample @ 6.5 ft; 02-SS-017-G
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-019	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Clay; Grey	1		1	Confirmatory, bottom and boundary sample @ 1.5 ft; 02-SS-018-B
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-020 SHEET 1 OF 1
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	Hit rock or cement at 3 ft
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

COORDINATE SYSTEM:
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T NEWBAN.GPJ GEOSN: T 9/14/01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-021	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
Impacted Sandy Silt; Stained Black				
Impacted Silty Sand; Grey	4		4	
	5		5	
Silty Sand; Grey				
	6		6	Confirmatory, bottom sample @ 6 ft; 02-SS-019-F
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	-----
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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TEST PIT LOG

BORING	02-022	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Silty Clay; Grey	1		1	Confirmatory, boundary sample @ 1.5 ft; 02-SS-020-B
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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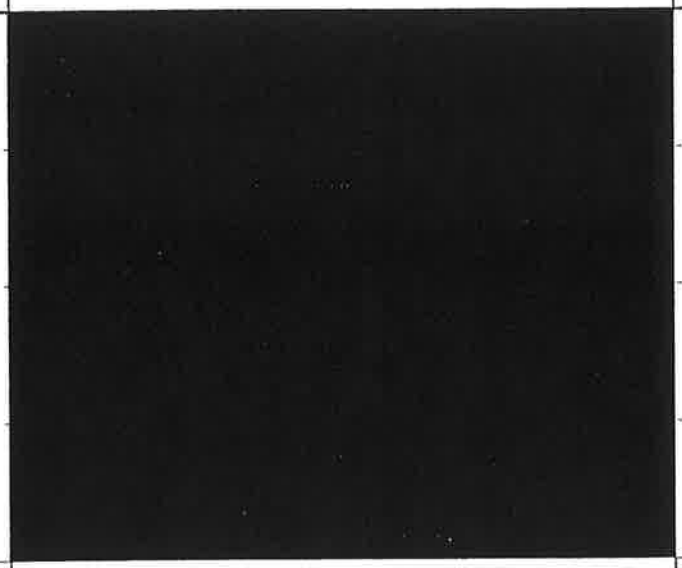
GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-023 SHEET 1 OF 1
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Impacted Sandy Silt; Stained Black	1		1	
	2		2	
	3		3	
	4		4	Stopped digging because pit walls collapsed.
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-024	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
ALM	2		2	
Sandy Fill; Brown	3		3	
Impacted Sandy Fill; Stained Black	4		4	
Clay; Green	5		5	
	6		6	
	7		7	Confirmatory, bottom sample @ 02-SS-021-G
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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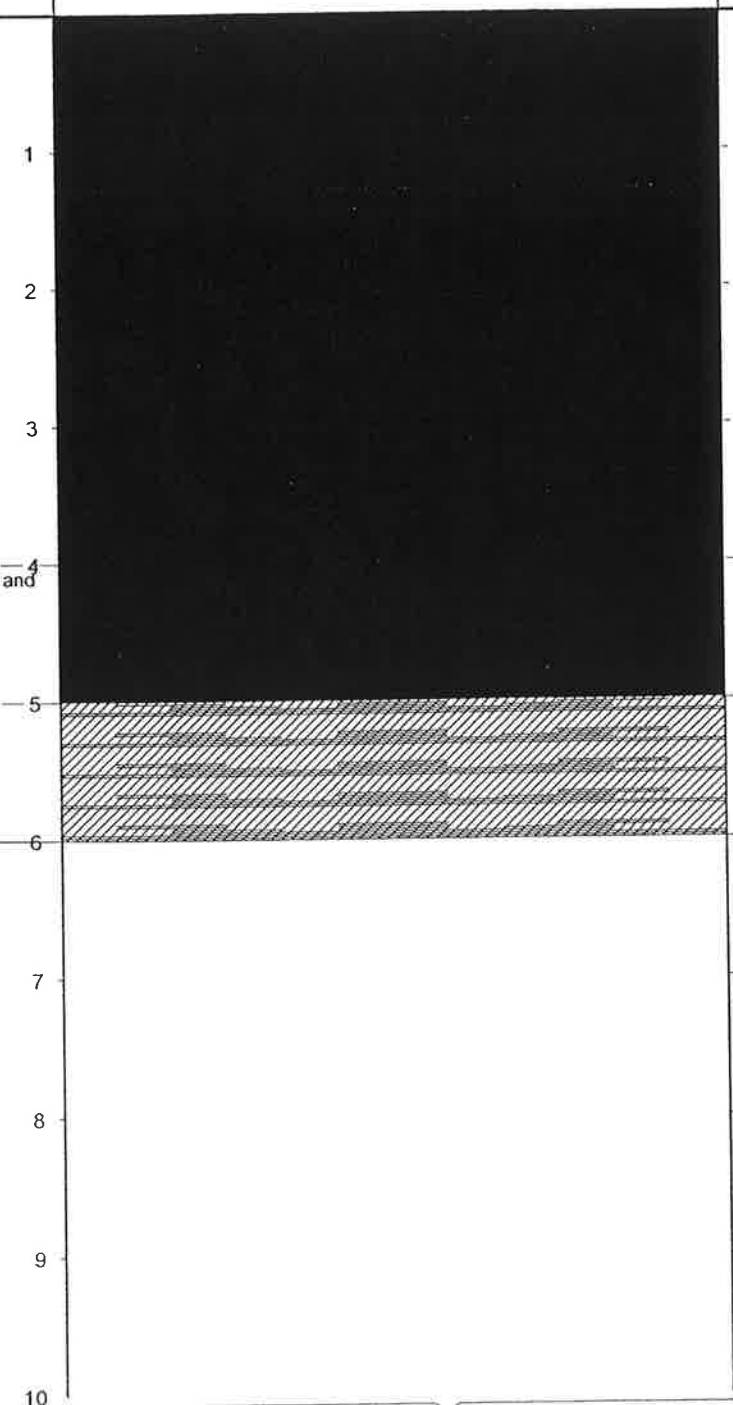
GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-025	SHEET	1 OF 1
START DATE	May 23, 01	ELEVATION	FT
FINISH DATE	May 23, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Impacted Sand; Stained Black	4			
Impacted Sand; Stained Black and Oily	5			
Clay; Grey	6			



CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-026 SHEET 1 OF 1
START DATE May 23, 01 ELEVATION FT
FINISH DATE May 23, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	Stopped digging because pit walls collapsed, impacted sediment visible at pit bottom
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
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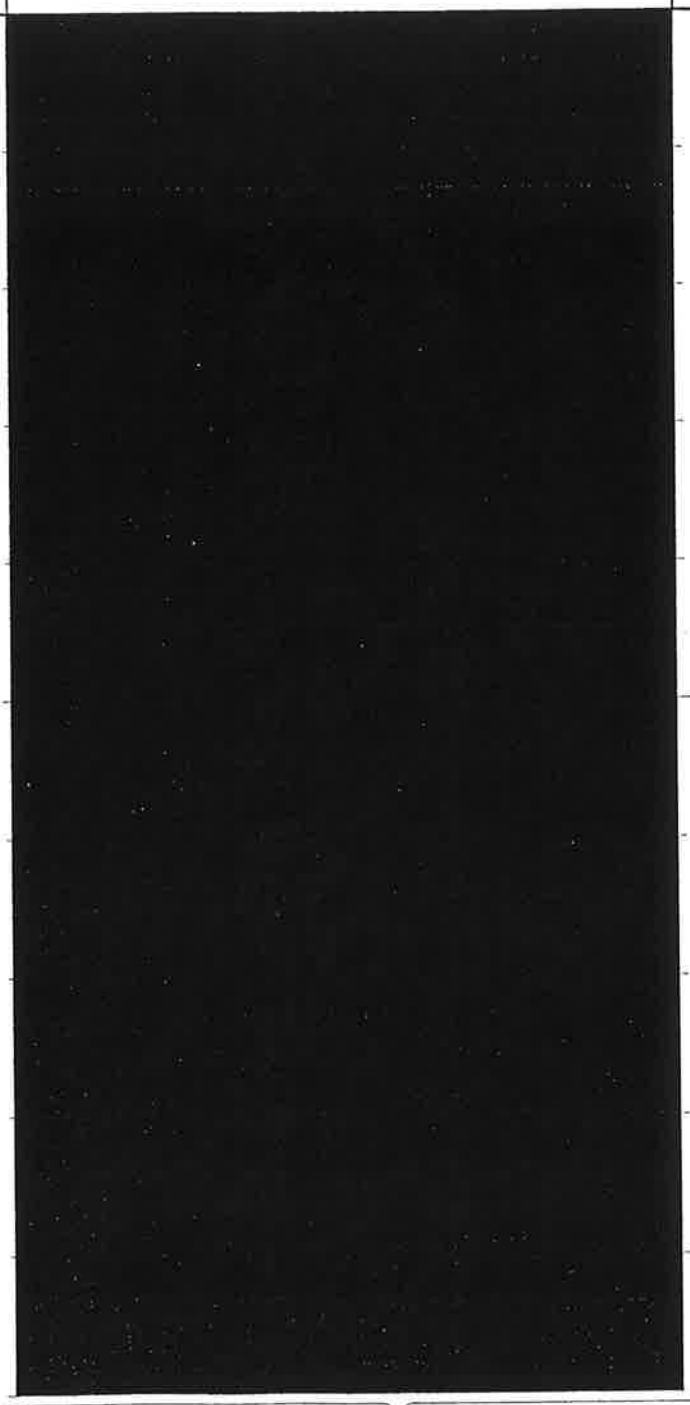
GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-027 SHEET 1 OF 2
START DATE May 24, 01 ELEVATION FT
FINISH DATE May 24, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Layers of Impacted Sand; Stained Black	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-027	SHEET	2 OF 2
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
	11		11	
	12		12	Confirmatory, bottom sample @ 12 ft; 02-SS-022-L
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-028	SHEET	1 OF 2
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt; Stained Black	1		1	
Sand; Grey	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-028	SHEET	2 OF 2
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
	11		11	
	12		12	Confirmatory, bottom sample @ 12 ft; 02-SS-023-L
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	-----
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-029	SHEET	1 OF 1
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Impacted Gravel; Stained Black and Oily	1		1	
Sand; Grey	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	Confirmatory, bottom sample @ 8 ft; 02-SS-024-H
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	-----
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-030 SHEET 1 OF 2
START DATE May 24, 01 ELEVATION FT
FINISH DATE May 24, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt; Stained Brown				
Sand; Brown	1		1	
Impacted Clay and Sandy Silt; Stained Black	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-030	SHEET	2 OF 2
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
	11		11	
	12		12	
	13		13	
	14		14	
	15		15	Confirmatory, bottom sample @ 15 ft; 02-SS-025-O
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-031	SHEET	1 OF 1
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Silty Clay; Stained Black	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
Silty Sand; Green	8		8	Confirmatory, bottom sample @ 8 ft; 02-SS-026-H
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-032	SHEET	1 OF 1
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown ALM				
Layers of Impacted Sand; Stained Black	1		1	
	2		2	
	3		3	
Sand; Brown	4		4	Confirmatory, bottom sample @ 4 ft; 02-SS-027-D
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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BORING	02-033	SHEET	1 OF 1
START DATE	May 24, 01	ELEVATION	FT
FINISH DATE	May 24, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

GS FORM: PIT 8/01

TEST PIT LOG

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sand; Brown	1		1	
	2		2	
Impacted Sand; Stained Black	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
Sand; Green	8		8	Confirmatory, bottom sample @ 8 ft; 02-SS-028-H
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-034 SHEET 1 OF 2
START DATE May 24, 01 ELEVATION FT
FINISH DATE May 24, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
Silt; Green	4		4	
Impacted Silt; Stained Black	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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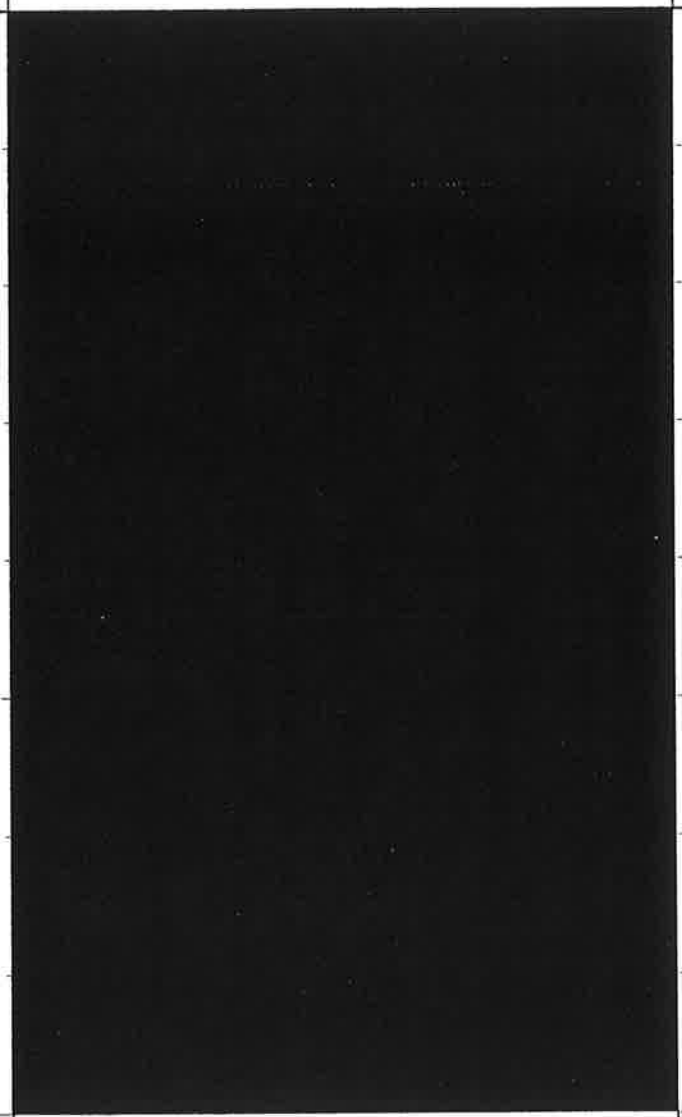
GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-034 SHEET 2 OF 2
START DATE May 24, 01 ELEVATION FT
FINISH DATE May 24, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
	11		11	
	12		12	
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	Impacted sample @ 18 ft; 02-SS-029-R
	19		19	
	20		20	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok REVIEWER
NORTHING
EASTING
ANGLE Vertical
BEARING ------
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-035	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	Confirmatory, bottom and boundary sample @ 10 ft; 02-SS-030-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	-----
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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Tel: (714) 969-0800 Fax: (714) 969-820

GS FORM PIT 8/01

TEST PIT LOG

BORING	02-036	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	Confirmatory, bottom and boundary sample @ 10 ft; 02-SS-031-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-037	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	Confirmatory, bottom and boundary sample @ 10 ft; 02-SS-032-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-038		SHEET 1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	Confirmatory, bottom and boundary sample @ 10 ft; 02-SS-033-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-039	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt in Corner of Pit; Stained Black	1		1	
Sandy Silt; Brown				
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	Stopped digging pit because into cement disposal area
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	**02-040**		**SHEET 1 OF 1**
START DATE	May 29, 01	**ELEVATION**	FT
FINISH DATE	May 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	Confirmatory, bottom and boundary sample @ 8 ft; 02-SS-034-H
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-041	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt; Stained Brown	1		1	
	2		2	
	3		3	
Silty Sand; Brown	4		4	
	5		5	
Silty Sand; Grey	6		6	
	7		7	Confirmatory, bottom sample @ 7 ft; 02-SS-035-G
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok	REVIEWER	
		PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-042		SHEET 1 OF 1
START DATE	May 29, 01	**ELEVATION**	FT
FINISH DATE	May 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	Confirmatory, bottom and boundary sample @ 8 ft; 02-SS-036-H
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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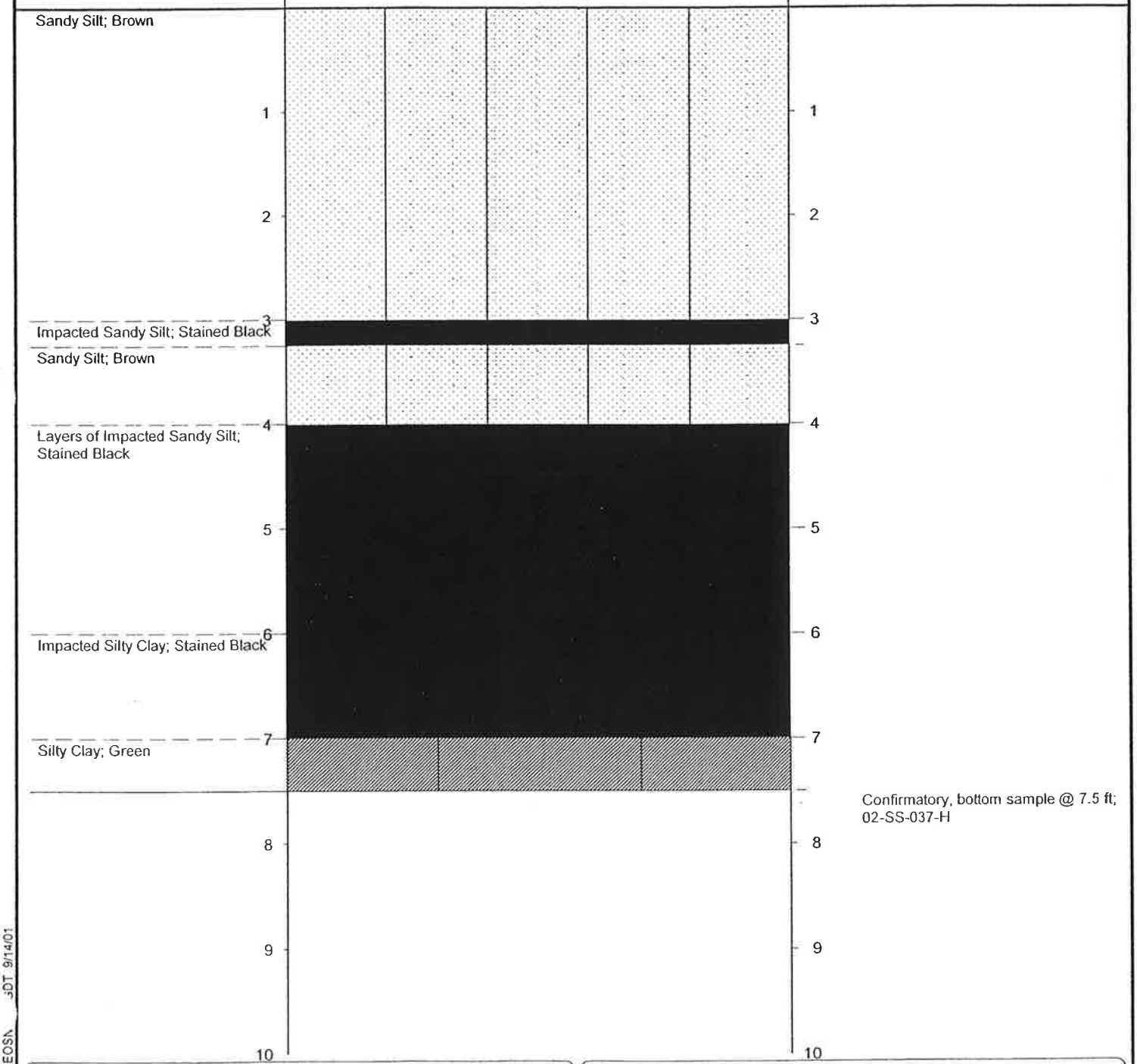
GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-043	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		



CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-044	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
ALM				
Sandy Silt; Brown	1		1	
	2		2	
Impacted Sandy Silt; Stained Black	3		3	
Impacted Silty Sand; Grey	4		4	
	5		5	
	6		6	
Silty Sand; Grey	7		7	Confirmatory, bottom sample @ 7.5 ft; 02-SS-038-H
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-045	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	3		3	
Impacted Sandy Silt; Stained Black				
Sandy Silt; Brown	4		4	
Layers of Impacted Sandy Silt; Stained Black	7		7	Confirmatory, bottom sample @ 7 ft; 02-SS-039-G
Impacted Silty Clay; Stained Black				
Silty Clay; Green				

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-046	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
Impacted Sandy Silt; Stained Black				
Sandy Silt; Grey	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	Confirmatory, bottom sample @ 7 ft; 02-SS-040-G
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	-----
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-047	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
Layers of Impacted Sandy Silt; Stained Black	3		3	
	4		4	
	5		5	
	6		6	
Silty Sand; Grey	7		7	
	8		8	
	9		9	
	10		10	Confirmatory, bottom sample @ 10 ft; 02-SS-041-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-048	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
Impacted Silty Sand; Stained Black	6		6	
	7		7	
	8		8	
Silty Sand with Clay; Green	9		9	
	10		10	Confirmatory, bottom sample @ 10 ft; 02-SS-042-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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BORING	02-049	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

GS FORM: PIT 8/01

TEST PIT LOG

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Road Aggregate				
Impacted Silty Sand; Stained Black	1		1	
Silty Sand; Green	2		2	
Silty Sand with Clay; Grey	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	Confirmatory, bottom sample @ 9 ft; 02-SS-043-I
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-050	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Impacted Gravel; Stained Black and Oily				
Sandy Fill; Yellow and Brown	1		1	
Sandy Silt with Clay; Grey	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	Confirmatory, bottom and boundary sample @ 10 ft; 02-SS-044-J

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-051	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
Impacted Sandy Silt; Stained Black and Oily	2		2	
Sandy Fill; Yellow	3		3	
Silty Sand; Grey	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	Confirmatory, bottom sample collected @ 9 ft; 02-SS-045-I
Silty Sand with Seashells; Grey	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM PIT 8/01

TEST PIT LOG

BORING	02-052	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
Sandy Silt; Green	4		4	
	5		5	
	6		6	
	7		7	
Impacted Gravel	8		8	
	9		9	Impacted sample @ 10 ft; 02-SS-046-J
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-053	SHEET	1 OF 1
START DATE	May 29, 01	ELEVATION	FT
FINISH DATE	May 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
Impacted Sandy Silt; Stained Black	1		1	
Silty Sand; Grey				
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
Silty Sand with Seashells	8		8	Confirmatory, bottom sample @ 8 ft; 02-SS-047-H
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Backhoe	EASTING	
DRILL MTHD	Test Pit	ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok	PRINTED	Sep 14, 01

REVIEWER

REMARKS:

COORDINATE SYSTEM:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT_NEWBAN.GPJ GL_EC.GDT 9/14/01

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2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-054		**SHEET** 1 OF 1
START DATE	Aug 29, 01	**ELEVATION**	FT
FINISH DATE	Aug 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Oil				
Sandy Silt; Brown				
Silty Clay, Green				
Impacted Silty Sand; Stained Black and Oily	1		1	
Silty Sand; Green				
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Shovel	**EASTING**	
DRILL MTHD		**ANGLE**	Vertical
DIAMETER		**BEARING**	-----
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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PIT_NEWBAN.GPJ GDT 9/14/01

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2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-055	SHEET	1 OF 1
START DATE	Aug 29, 01	ELEVATION	FT
FINISH DATE	Aug 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Oil Sandy Silt; Brown				
Silty Clay, Green				
Impacted Silty Sand; Stained Black and Oily	1		1	
Silty Sand; Green				
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Shovel	EASTING	
DRILL MTHD		ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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PIT_NEWBAN.GPJ GL_C.GDT 9/14/01

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-056 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-057 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER
NORTHING
EASTING
ANGLE Vertical
BEARING -----
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	**02-058**		**SHEET 1 OF 1**
START DATE	Aug 29, 01	**ELEVATION**	FT
FINISH DATE	Aug 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
ALM	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Shovel	**EASTING**	
DRILL MTHD		**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	**02-059**		**SHEET 1 OF 1**
START DATE	Aug 29, 01	**ELEVATION**	FT
FINISH DATE	Aug 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Oil				
Sandy Silt; Brown				
Silty Clay, Green				
Impacted Silty Sand; Stained Black and Oily	1		1	
Silty Sand; Green				
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Shovel	**EASTING**	
DRILL MTHD		**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-060 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-061 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-062 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER
NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-063		SHEET 1 OF 1
START DATE	Aug 29, 01	**ELEVATION**	FT
FINISH DATE	Aug 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sand; Brown and Tan	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Shovel	**EASTING**	
DRILL MTHD		**ANGLE**	Vertical
DIAMETER		**BEARING**	-----
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

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GS FORM PIT 8/01

TEST PIT LOG

BORING	02-064	SHEET	1 OF 1
START DATE	Aug 29, 01	ELEVATION	FT
FINISH DATE	Aug 29, 01	DATUM	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
ALM	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		NORTHING	
EQUIPMENT	Shovel	EASTING	
DRILL MTHD		ANGLE	Vertical
DIAMETER		BEARING	------
LOGGER	M. Yanok REVIEWER	PRINTED	Sep 14, 01

REMARKS:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-065 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown				
ALM	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Sep 14, 01

REMARKS:

COORDINATE SYSTEM:
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PIT NEWBAN GPJ G

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-066 SHEET 1 OF 1
START DATE Aug 29, 01 ELEVATION FT
FINISH DATE Aug 29, 01 DATUM Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Shovel
DRILL MTHD
DIAMETER
LOGGER M. Yanok REVIEWER
NORTHING
EASTING
ANGLE Vertical
BEARING -----
PRINTED Sep 14, 01

REMARKS:

COORDINATE SYSTEM:
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	**02-067**		**SHEET 1 OF 1**
START DATE	Aug 29, 01	**ELEVATION**	FT
FINISH DATE	Aug 29, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Silt; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Shovel	**EASTING**	
DRILL MTHD		**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Sep 14, 01

REMARKS:

COORDINATE SYSTEM:
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GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-068		**SHEET** 1 OF 1
START DATE	Nov 20, 01	**ELEVATION**	FT
FINISH DATE	Nov 20, 01	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Brown				
Layers of Impacted Silty Sand; Black and Oily, Black, and Dark Grey	1		1	Impacted samples of the three distinct types of impacts were collected from various depths in the trench; 02-SS-048, 02-SS-049, 02-SS-050
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
Silty Sand; Brown	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Trench	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok **REVIEWER**	**PRINTED**	Nov 30, 01

REMARKS:

COORDINATE SYSTEM:
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PIT NEWBAN.GPJ GE_ .IEC.GDT 11/30/01

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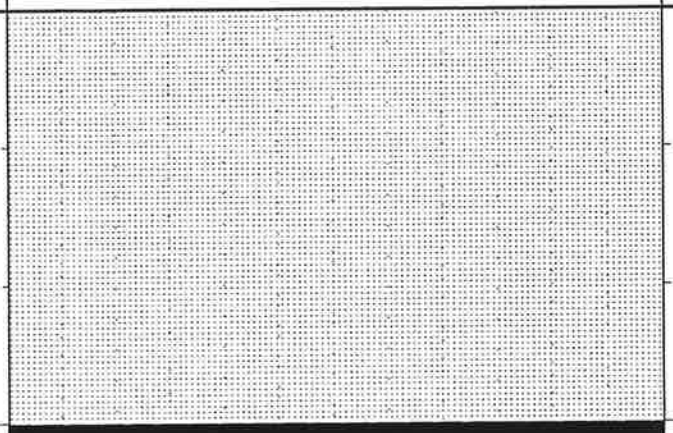
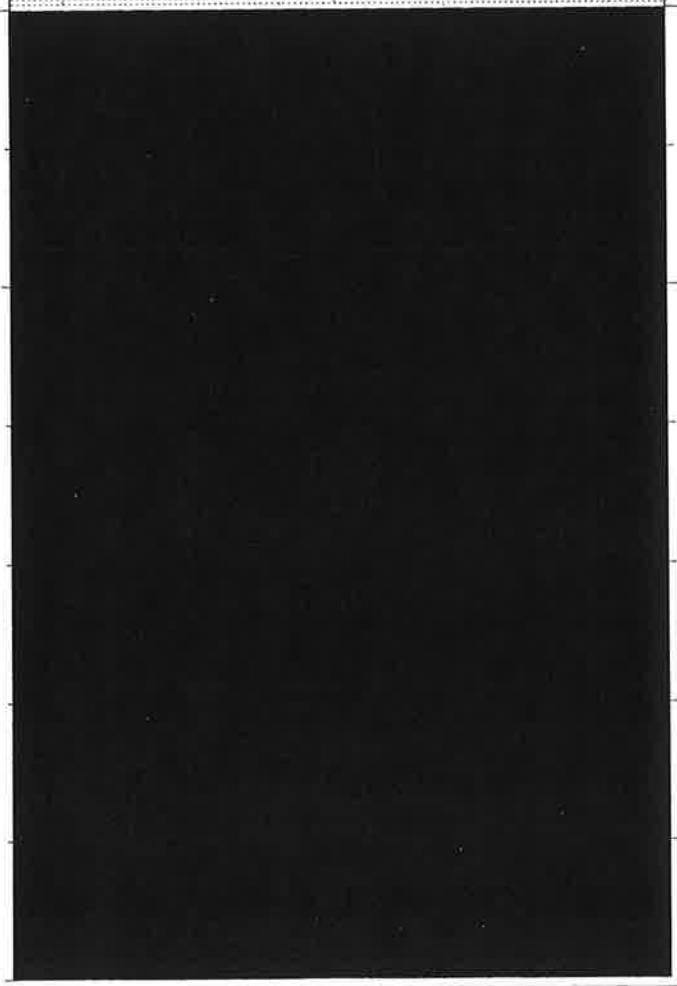
GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-069 **SHEET** 1 OF 2
START DATE Nov 20, 01 **ELEVATION** FT
FINISH DATE Nov 20, 01 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sand; Brown	1		1	
	2		2	
Layers of Impacted Sand; Black and Oily, Black, Dark Grey, and Solid Pieces of Cement	3		3	Due to erosion of the bluff, the depth to impacted material varies between 3 - 6 feet bgs in this area.
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	Impacted material types were mixed in this trench. Two samples that visually contained representative impact mixes were collected from various depths in the trench; 02-SS-051, 02-SS-052
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Trench
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Nov 30, 01

REMARKS:

COORDINATE SYSTEM:

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GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-069 **SHEET** 2 OF 2
START DATE Nov 20, 01 **ELEVATION** FT
FINISH DATE Nov 20, 01 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sand; Brown	11		11	
	12		12	
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Trench
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------
PRINTED Nov 30, 01

REMARKS:

COORDINATE SYSTEM:
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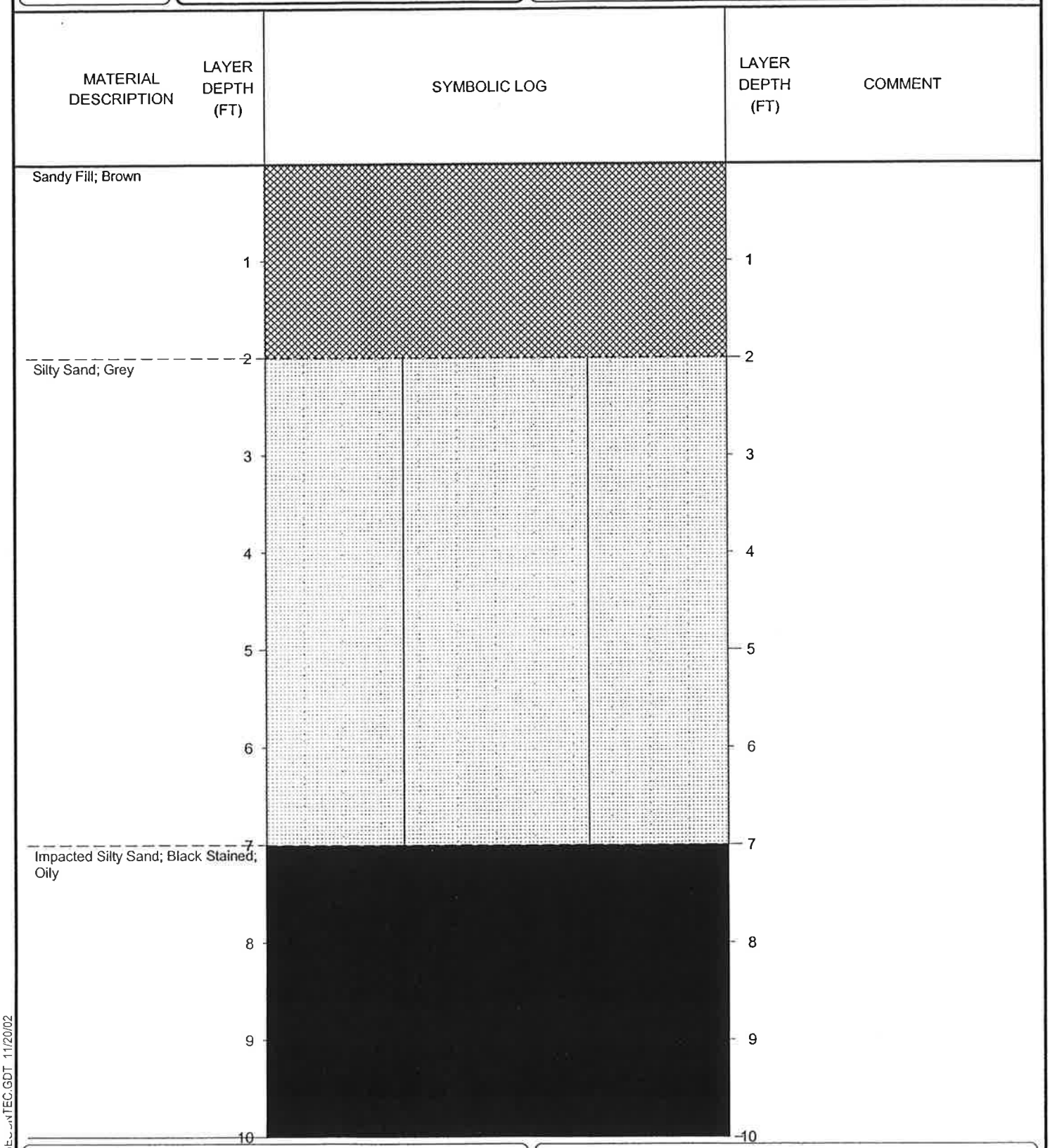
GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-070		**SHEET** 1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		



CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

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Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-071	**SHEET**	1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Sandy Fill; Brown	1		1	
Impacted Silty Sand with Clay; Dark Stained; Oily	2		2	Netting and electrical wire debris observed (likely former sump materials).
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

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PIT NEWBAN.GPJ GL .TEC.GDT 11/20/02

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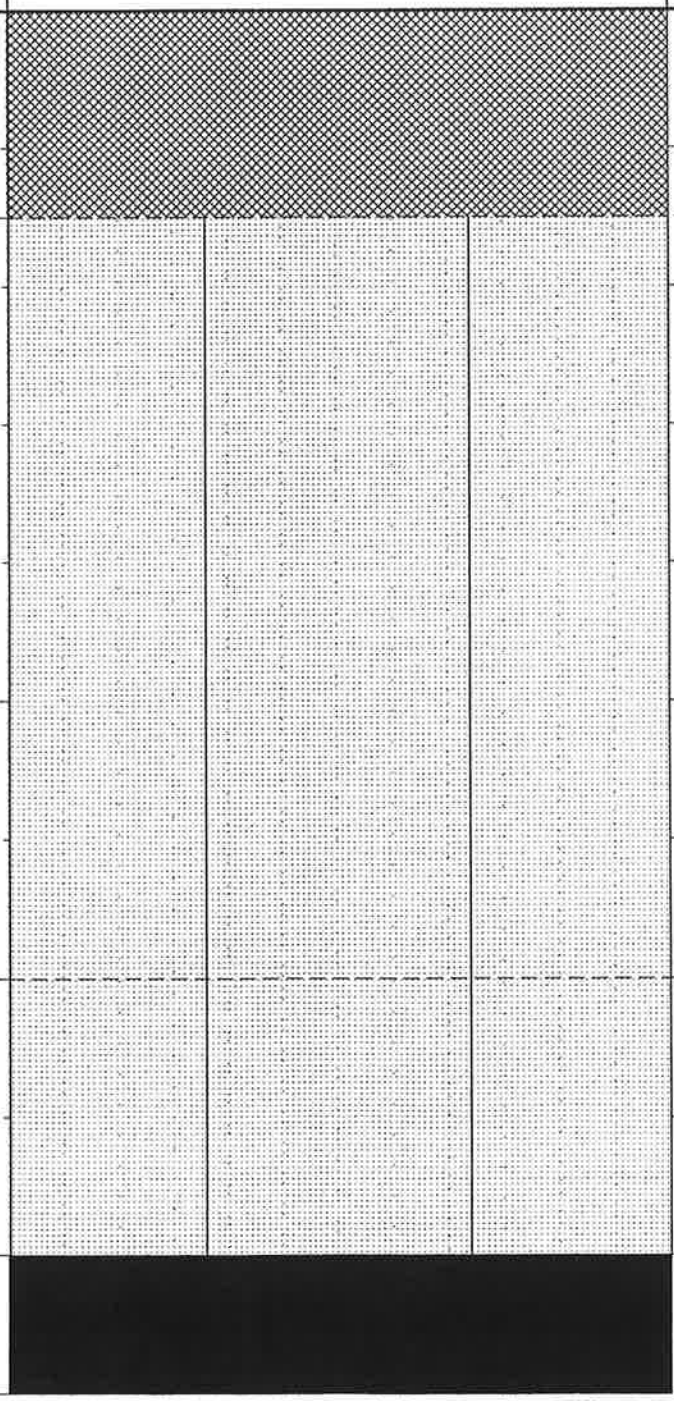
GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-072		**SHEET** 1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown	1		1	
Silty Sand; Brown	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
Silty Sand; Grey	7		7	
	8		8	
Impacted Silty Sand; Dark; Oil Stained	9		9	Eastern side of pit showed impacts western side. Impacts not as apparent.
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

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PIT NEWBAN.GPJ GE...rEC.GDT 11/20/02

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Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-073		**SHEET** 1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
Silty Sand; Grey	6		6	
	7		7	
Silty Sand; Grey; some Staining	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GL_EC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-074 **SHEET** 1 OF 1
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown	1		1	
ALM, dark Fill	2		2	Wood and debris observed.
	3		3	
	4		4	
	5		5	
	6		6	
Silty Sand; Grey	7		7	Some mottled oil staining noted.
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GEC...EC.GDT 11/20/02

GEOSYNTEC CONSULTANTS
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-075		**SHEET** 1 OF 2
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown				
ALM, dark Fill	1		1	
	2		2	
	3		3	
Silty Sand; Grey	4		4	Some areas of free oil noted.
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

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PIT NEWBAN.GPJ GEC_EC.GDT 11/20/02

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2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-075 **SHEET** 2 OF 2
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Shell	11		11	Apparent groundwater seepage noted.
	12		12	
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GE...EC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-076	**SHEET**	1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill	1		1	Some wood debris.
Sand; Dark Grey	2		2	
	3		3	
	4		4	
	5		5	
Impacted Clay; Dark stained; Oily	6		6	Possible edge of sump.
	7		7	
Silty Sand; Shell	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GL_.TEC.GDT 11/20/02

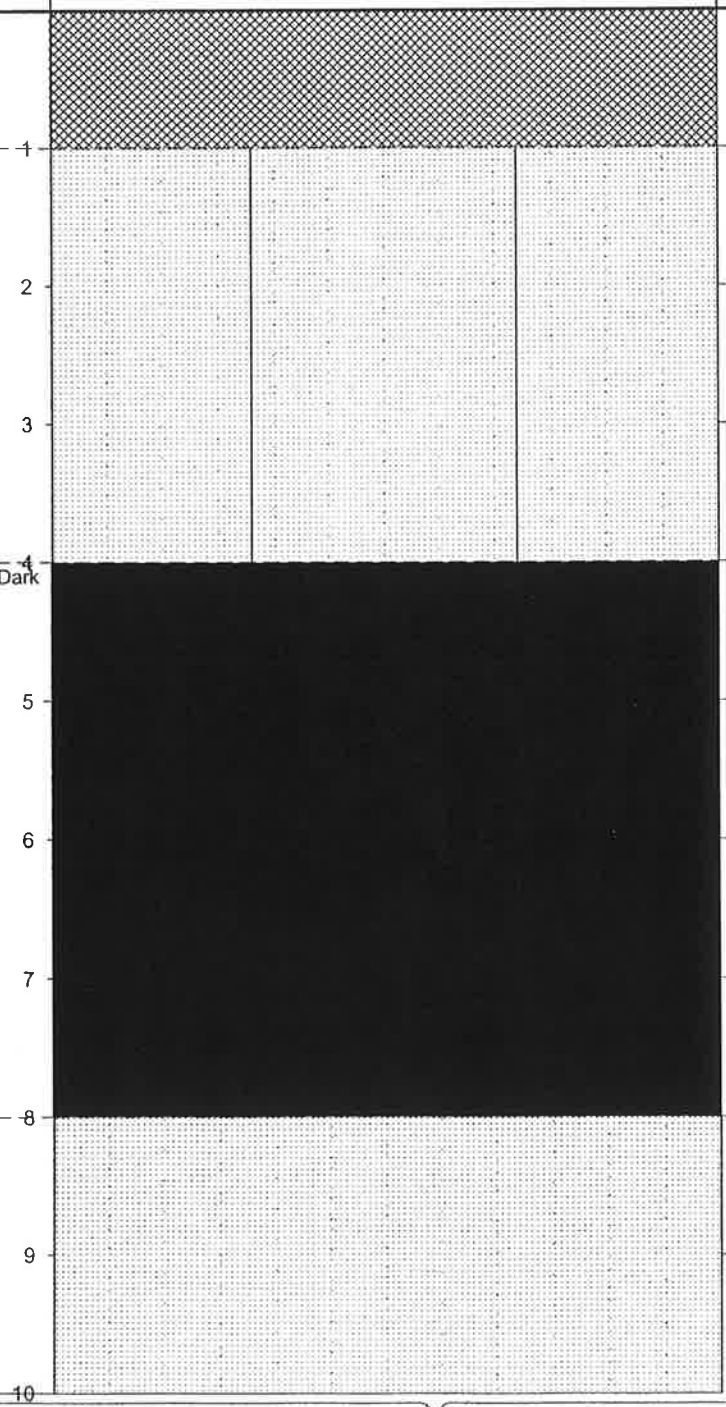
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-077		**SHEET** 1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill				
	1		1	
Silty Sand; Brown				
	2		2	
	3		3	
	4		4	
Impacted Silty Sand with Clay; Dark stained; Oily				
	5		5	
	6		6	
	7		7	
	8		8	
Sand; Grey; Shells				
	9		9	
	10		10	



CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GE...TEC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-078 **SHEET** 1 OF 1
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown	1		1	
	2		2	
Silty Sand; Grey	3		3	Minor impacts noted due to ALM pieces and isolated oil-staining.
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

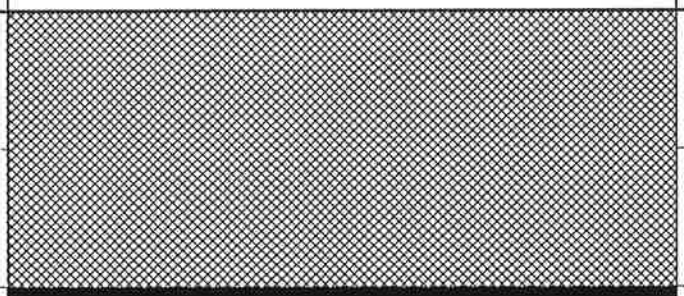
PIT_NEWBAN.GPJ GEC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-079 **SHEET** 1 OF 1
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown	1		1	
Impacted Sand; Dark Stained	2		2	
	3		3	
Impacted Clay; Dark Stained; Oily	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING -----

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

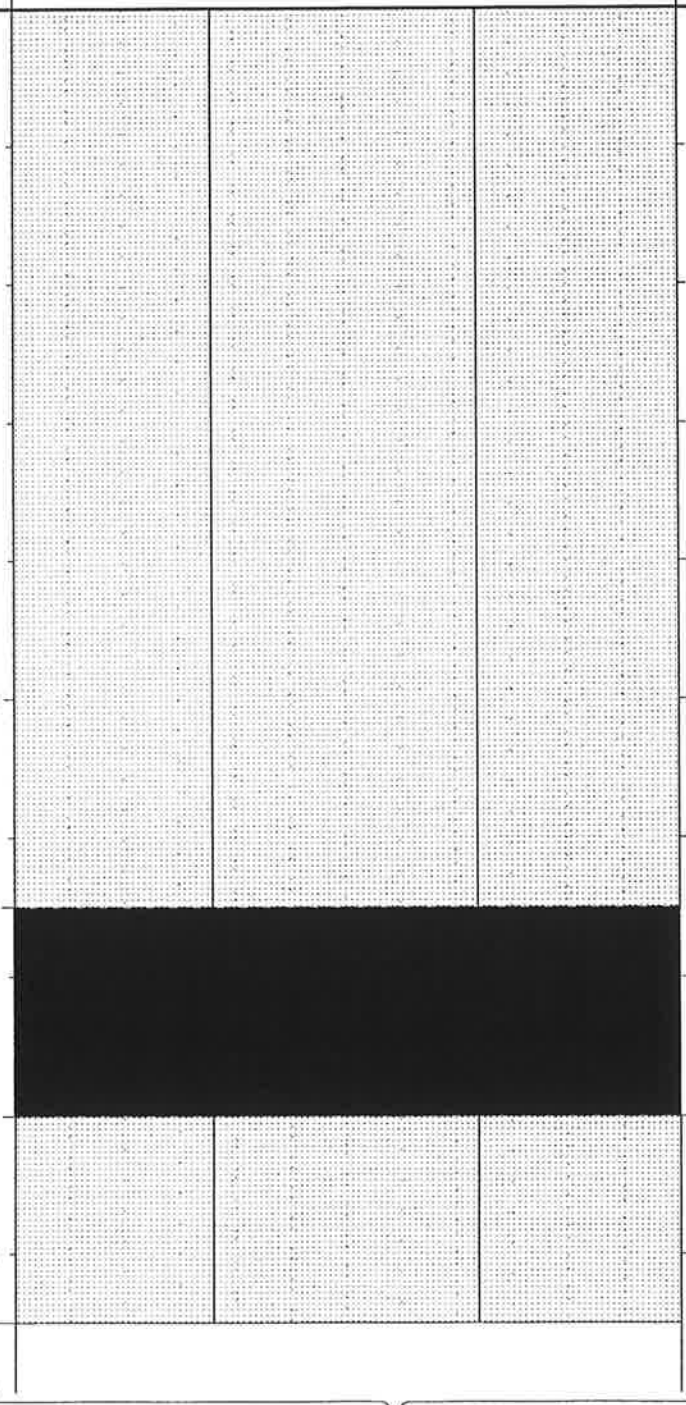
PIT NEWBAN.GPJ GEC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-080	**SHEET**	1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Brown	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
Impacted Clay/Silt; Dark Stained; Oily	7		7	Roots and other wood debris noted.
Silty Sand; Grey	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GE...EC.GDT 11/20/02

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2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-081	**SHEET**	1 OF 2
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown	1		1	
Impacted Sand; Dark stained; Oily	2		2	Indications of sump material down to 11 ft-bgs.
	3		3	
	4		4	
	5		5	
Impacted Clay; Dark stained; Oily	6		6	
	7		7	
Impacted Silty Sand; Shells	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GEC.GDT 11/20/02

GEOSYNTEC CONSULTANTS
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-081 **SHEET** 2 OF 2
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Grey; Shells	11		11	
	12		12	
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

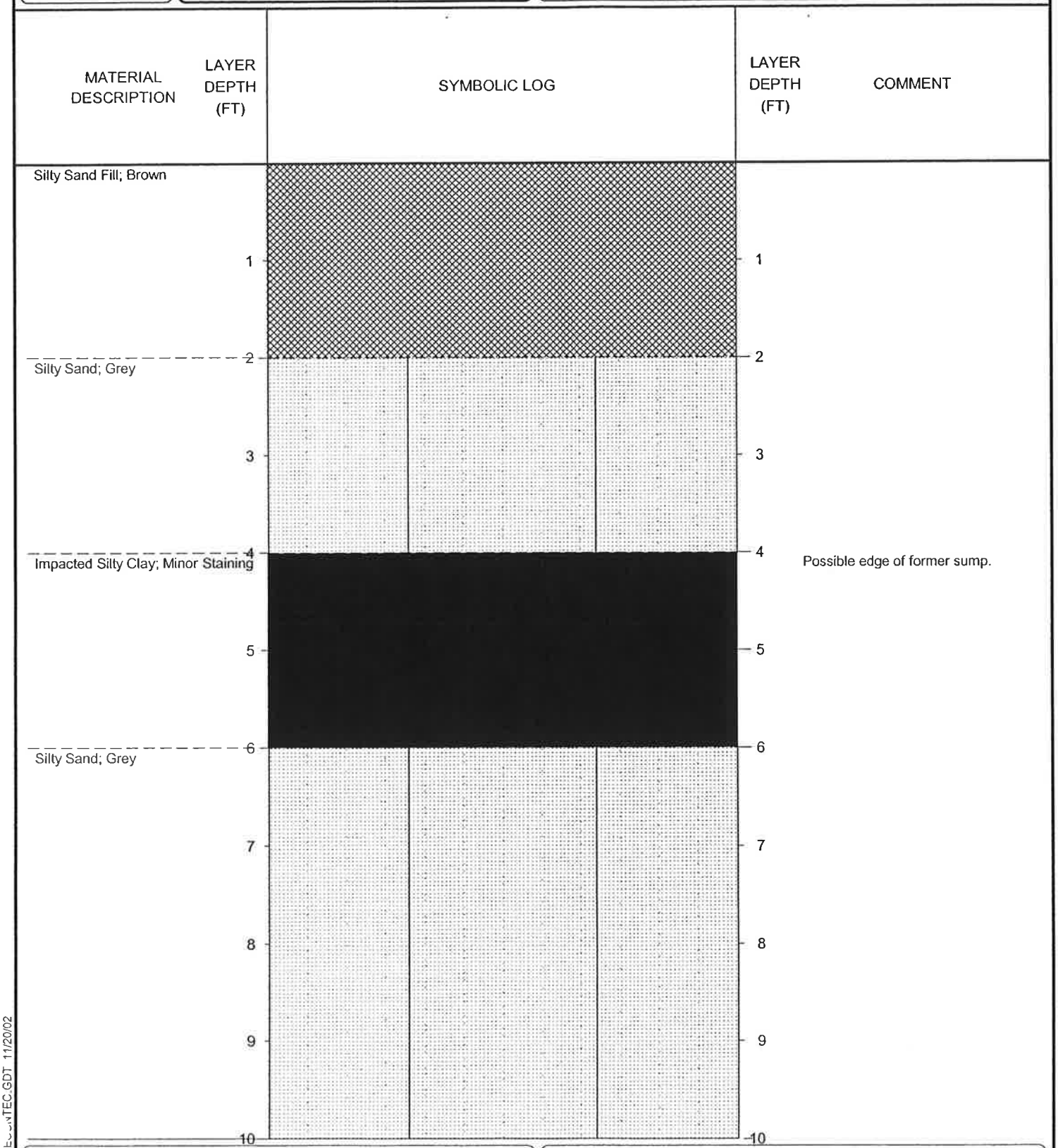
PIT NEWBAN.GPJ G_ .TEC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-082	**SHEET**	1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		



CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT_NEWBAN.GPJ GEOSYNTEC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-083		**SHEET** 1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Brown	0		0	
	1		1	
	2		2	
Impacted Silty Sand; Staining; Oily	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
Silty Sand; Grey; Shells	8		8	Isolated oil staining.
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT_NEWBAN.GPJ GE..._EC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-084 **SHEET** 1 OF 2
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Brown				
	1		1	
	2		2	
	3		3	
	4		4	
Silty Sand with Clay Lenses; Grey	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------

REMARKS:

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PIT NEWBAN.GPJ GEOSYNTEC.GDT 11/20/02

GEOSYNTEC CONSULTANTS
2100 Main Street, Suite 150
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Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-084		**SHEET** 2 OF 2
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Grey; Shells	11		11	
	12		12	
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GL .TEC.GDT 11/20/02

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-085		**SHEET** 1 OF 2
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Impacted Sand with Gravel				
Silty Sand; Brown	1		1	
	2		2	
Silty Sand with Clay Lenses; Grey	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ G...TEC.GDT 11/20/02

GEOSYNTEC CONSULTANTS
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING 02-085 **SHEET** 2 OF 2
START DATE Jul 31, 02 **ELEVATION** FT
FINISH DATE Jul 31, 02 **DATUM** Below Ground Surface
PROJECT Newport Banning Ranch
LOCATION Newport Beach, California
NUMBER HR0575

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand; Grey; Shells	11		11	
	12		12	
	13		13	
	14		14	
	15		15	
	16		16	
	17		17	
	18		18	
	19		19	
	20		20	

CONTRACTOR
EQUIPMENT Backhoe
DRILL MTHD Test Pit
DIAMETER
LOGGER M. Yanok **REVIEWER**

NORTHING
EASTING
ANGLE Vertical
BEARING ------

REMARKS:

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PIT NEWBAN.GPJ GL...TEC.GDT 11/20/02

GEOSYNTEC CONSULTANTS
2100 Main Street, Suite 150
Huntington Beach, California 92648
Tel: (714) 969-0800 Fax: (714) 969-0820

GS FORM: PIT 8/01

TEST PIT LOG

BORING	02-086		**SHEET** 1 OF 1
START DATE	Jul 31, 02	**ELEVATION**	FT
FINISH DATE	Jul 31, 02	**DATUM**	Below Ground Surface
PROJECT	Newport Banning Ranch		
LOCATION	Newport Beach, California		
NUMBER	HR0575		

MATERIAL DESCRIPTION	LAYER DEPTH (FT)	SYMBOLIC LOG	LAYER DEPTH (FT)	COMMENT
Silty Sand Fill; Brown	1		1	
	2		2	Wood debris noted.
Impacted Silty Sand with Clay Lenses; Dark stained; Oily	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
Silty Sand; Grey	9		9	
	10		10	

CONTRACTOR		**NORTHING**	
EQUIPMENT	Backhoe	**EASTING**	
DRILL MTHD	Test Pit	**ANGLE**	Vertical
DIAMETER		**BEARING**	------
LOGGER	M. Yanok	**REVIEWER**	

REMARKS:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

PIT NEWBAN.GPJ GEOSYNTEC.GDT 11/20/02

APPENDIX B

GROUNDWATER AND FREE PRODUCT LABORATORY DATA

NOTE: Free Product Samples are labeled as "02-GW-002" and "Drill Site" (02-GW-006)

Calscience
Environmental
Laboratories, Inc.

June 03, 2002

Eric Smalstig
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Subject: **Calscience Work Order No.:** **02-05-1305**
Client Reference: **NBR / HR0656-02**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/29/02 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Total Digestion
Method: EPA 6010B / EPA 7470A

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	**02-05-1305-1**	**05/29/02**	**Aqueous**	**05/30/02**	**05/31/02**	**020530lcs5**

Comment(s): Mercury was analyzed on 5/30/02 8:55:27 PM with batch 020530lcs6

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Mercury	ND	0.00050	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Molybdenum	0.00978	0.00500	1		mg/L
Barium	0.247	0.010	1		mg/L	Nickel	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Selenium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Silver	ND	0.00500	1		mg/L
Chromium (Total)	ND	0.00500	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Vanadium	ND	0.00500	1		mg/L
Copper	0.00693	0.00500	1		mg/L	Zinc	0.0206	0.0100	1		mg/L
Lead	ND	0.0100	1		mg/L						

Method Blank	099-04-008-846	N/A	Aqueous	05/30/02	06/03/02	020530lcs6

ırameter	Result	RL	DF	Qual	Units
Mercury	ND	0.00050	1		mg/L

Method Blank	097-01-003-2,406	N/A	Aqueous	05/30/02	05/31/02	020530lcs5

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Molybdenum	ND	0.00500	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Nickel	ND	0.00500	1		mg/L
Barium	ND	0.0100	1		mg/L	Selenium	ND	0.0150	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Silver	ND	0.00500	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Thallium	ND	0.0150	1		mg/L
Chromium (Total)	ND	0.00500	1		mg/L	Vanadium	ND	0.00500	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Zinc	ND	0.0100	1		mg/L
Copper	ND	0.00500	1		mg/L	Lead	ND	0.0100	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Ext. + D/I
Method: EPA 8015M

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Matrix	Date Collected	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	02-05-1305-1	Aqueous	05/29/02	05/29/02	05/30/02	02052905sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	130000	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	111	53-141	

Method Blank	098-03-003-1,012	Aqueous	N/A	05/29/02	05/29/02	02052905sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	95	53-141	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8015M

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Matrix	Date Collected	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	02-05-1305-1	Aqueous	05/29/02	N/A	05/30/02	02052902sa

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	3700	1000	10		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	124	49-157	

Client Sample Number	Lab Sample Number	Matrix	Date Collected	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	098-03-006-2,701	Aqueous	N/A	N/A	05/30/02	02052902sa

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	49-157	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Ext. + D/I
Method: TPH - Carbon Range

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	02-05-1305-1	05/29/02	Aqueous	05/29/02	05/30/02	02052905sa

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C21-C22	9800		1		ug/L
C8	ND		1		ug/L	C23-C24	8700		1		ug/L
C9-C10	1400		1		ug/L	C25-C28	16000		1		ug/L
C11-C12	7300		1		ug/L	C29-C32	13000		1		ug/L
C13-C14	9700		1		ug/L	C33-C36	8700		1		ug/L
C15-C16	12000		1		ug/L	C37-C40	7200		1		ug/L
C17-C18	12000		1		ug/L	C41-C44	5800		1		ug/L
C19-C20	12000		1		ug/L	C7-C44 Total	120000	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	111	53-141	

Method Blank	098-03-003-1,012	N/A	Aqueous	05/29/02	05/29/02	02052905sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	95	53-141	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Extraction
Method: EPA 418.1

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Matrix	Date Collected	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	02-05-1305-1	Aqueous	05/29/02	05/29/02	05/30/02	02052905sa

Parameter	Result	RL	DF	Qual	Units
TRPH	150	100	100		mg/L

Method Blank	099-07-016-36	Aqueous	N/A	05/29/02	05/30/02	02052905sa

Parameter	Result	RL	DF	Qual	Units
TRPH	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 3510B
Method: EPA 8270C

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	02-05-1305-1	05/29/02	Aqueous	05/30/02	05/30/02	0205302

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	50	5		ug/L	2,4-Dinitrophenol	ND	250	5		ug/L
Aniline	ND	50	5		ug/L	4-Nitrophenol	ND	50	5		ug/L
Phenol	ND	50	5		ug/L	Dibenzofuran	ND	50	5		ug/L
Bis(2-Chloroethyl) Ether	ND	130	5		ug/L	2,4-Dinitrotoluene	ND	50	5		ug/L
2-Chlorophenol	ND	50	5		ug/L	2,6-Dinitrotoluene	ND	50	5		ug/L
1,3-Dichlorobenzene	ND	50	5		ug/L	Diethyl Phthalate	ND	50	5		ug/L
1,4-Dichlorobenzene	ND	50	5		ug/L	4-Chlorophenyl-Phenyl Ether	ND	50	5		ug/L
Benzyl Alcohol	ND	50	5		ug/L	Fluorene	ND	50	5		ug/L
1,2-Dichlorobenzene	ND	50	5		ug/L	4-Nitroaniline	ND	50	5		ug/L
2-Methylphenol	ND	50	5		ug/L	Azobenzene	ND	50	5		ug/L
Bis(2-Chloroisopropyl) Ether	ND	50	5		ug/L	4,6-Dinitro-2-Methylphenol	ND	250	5		ug/L
3/4-Methylphenol	ND	50	5		ug/L	N-Nitrosodiphenylamine	ND	50	5		ug/L
' ·Nitroso-di-n-propylamine	ND	50	5		ug/L	4-Bromophenyl-Phenyl Ether	ND	50	5		ug/L
xachloroethane	ND	50	5		ug/L	Hexachlorobenzene	ND	50	5		ug/L
,ıtrobenzene	ND	130	5		ug/L	Pentachlorophenol	ND	50	5		ug/L
Isophorone	ND	50	5		ug/L	Phenanthrene	ND	50	5		ug/L
2-Nitrophenol	ND	50	5		ug/L	Anthracene	ND	50	5		ug/L
2,4-Dimethylphenol	57	50	5		ug/L	Di-n-Butyl Phthalate	ND	50	5		ug/L
Benzoic Acid	ND	250	5		ug/L	Fluoranthene	ND	50	5		ug/L
Bis(2-Chloroethoxy) Methane	ND	50	5		ug/L	Benzidine	ND	250	5		ug/L
2,4-Dichlorophenol	ND	50	5		ug/L	Pyrene	ND	50	5		ug/L
1,2,4-Trichlorobenzene	ND	50	5		ug/L	Pyridine	ND	50	5		ug/L
Naphthalene	57	50	5		ug/L	Butyl Benzyl Phthalate	ND	50	5		ug/L
4-Chloroaniline	ND	50	5		ug/L	3,3'-Dichlorobenzidine	ND	130	5		ug/L
Hexachloro-1,3-Butadiene	ND	50	5		ug/L	Benzo (a) Anthracene	ND	50	5		ug/L
4-Chloro-3-Methylphenol	ND	50	5		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	50	5		ug/L
2-Methylnaphthalene	ND	50	5		ug/L	Chrysene	ND	50	5		ug/L
Hexachlorocyclopentadiene	ND	130	5		ug/L	Di-n-Octyl Phthalate	ND	50	5		ug/L
2,4,6-Trichlorophenol	ND	50	5		ug/L	Benzo (k) Fluoranthene	ND	50	5		ug/L
2,4,5-Trichlorophenol	ND	50	5		ug/L	Benzo (b) Fluoranthene	ND	50	5		ug/L
2-Chloronaphthalene	ND	50	5		ug/L	Benzo (a) Pyrene	ND	50	5		ug/L
2-Nitroaniline	ND	50	5		ug/L	Benzo (g,h,i) Perylene	ND	50	5		ug/L
Dimethyl Phthalate	ND	50	5		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	50	5		ug/L
Acenaphthylene	ND	50	5		ug/L	Dibenz (a,h) Anthracene	ND	50	5		ug/L
3-Nitroaniline	ND	50	5		ug/L	1-Methylnaphthalene	ND	50	5		ug/L
Acenaphthene	ND	50	5		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	63	15-138		Phenol-d6	45	17-141	
Nitrobenzene-d5	89	56-123		2-Fluorobiphenyl	78	45-120	
2,4,6-Tribromophenol	61	32-143		p-Terphenyl-d14	105	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 3510B
Method: EPA 8270C

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**095-01-003-1,031**	**N/A**	**Aqueous**	**05/30/02**	**05/30/02**	**0205302**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
3/4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
exachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	51	15-138		Phenol-d6	33	17-141	
Nitrobenzene-d5	74	56-123		2-Fluorobiphenyl	78	45-120	
2,4,6-Tribromophenol	51	32-143		p-Terphenyl-d14	111	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8260B

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
GW-DRILL SITE	02-05-1305-1	05/29/02	Aqueous	N/A	05/31/02	053002BW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	120	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	23	1	1		ug/L
Bromomethane	ND	10	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	2.9	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	2.8	1.0	1		ug/L
sec-Butylbenzene	1.8	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
Carbon Disulfide	ND	10	1		ug/L	Naphthalene	95	10	1		ug/L
arbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	4.8	1.0	1		ug/L
lorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	10	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	6.5	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	1.3	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	46	1	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	13	1	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	93	1	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	70	1	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	95	86-118		Toluene-d8	98	88-110	
1,4-Bromofluorobenzene	101	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8260B

Project: NBR / HR0656-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-10-006-5,296**	**N/A**	**Aqueous**	**N/A**	**05/31/02**	**053002BW**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	10	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
Carbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
Carbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	10	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	101	86-118		Toluene-d8	98	88-110	
1,4-Bromofluorobenzene	91	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Total Digestion
Method: EPA 6010B

Project: NBR / HR0656-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
GW-DRILL SITE	Aqueous	ICP 3300	05/30/02	05/31/02	053002ms5

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	91	92	80-120	1	0-20	
Arsenic	90	91	80-120	1	0-20	
Barium	88	90	80-120	1	0-20	
Beryllium	86	87	80-120	1	0-20	
Cadmium	85	87	80-120	1	0-20	
Chromium (Total)	87	87	80-120	1	0-20	
Cobalt	90	91	80-120	1	0-20	
Copper	93	93	80-120	0	0-20	
Lead	85	85	80-120	1	0-20	
Molybdenum	85	85	80-120	1	0-20	
Nickel	88	89	80-120	1	0-20	
Selenium	85	86	80-120	1	0-20	
Silver	88	89	80-120	1	0-20	
Thallium	79	80	80-120	1	0-20	3
Vanadium	87	88	80-120	1	0-20	
Zinc	98	99	80-120	1	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Total Digestion
Method: EPA 6010B

Project: NBR / HR0656-02

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
097-01-003-2,406	Aqueous	ICP 3300	05/31/02	020530-I	020530lcs5

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Antimony	1.00	1.03	103	80-120	
Arsenic	1.00	0.986	99	80-120	
Barium	1.00	1.09	109	80-120	
Beryllium	1.00	0.976	98	80-120	
Cadmium	1.00	0.998	100	80-120	
Chromium (Total)	1.00	1.02	102	80-120	
Cobalt	1.00	1.08	108	80-120	
Copper	1.00	0.996	100	80-120	
Lead	1.00	1.01	101	80-120	
Molybdenum	1.00	0.996	100	80-120	
Nickel	1.00	1.06	106	80-120	
Selenium	1.00	0.935	94	80-120	
Silver	0.500	0.489	98	80-120	
Thallium	1.00	1.01	101	80-120	
Vanadium	1.00	0.999	100	80-120	
Zinc	1.00	1.03	103	80-120	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Total Digestion
Method: EPA 7470A

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-05-1243-1	Aqueous	Mercury	05/30/02	06/03/02	053002ms6

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	83	73	71-134	13	0-14	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Total Digestion
Method: EPA 7470A

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-04-008-846	Aqueous	Mercury	06/03/02	020530 I	020530lcs6

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Mercury	0.0100	0.00984	98	90-122	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8015M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-05-1174-1	Aqueous	GC 1	N/A	05/30/02	02052902ms

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	102	119	72-120	15	0-21	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8015M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-006-2,701	Aqueous	GC 1	N/A	05/30/02	02052902sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	114	113	81-123	0	0-17	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Ext. + D/I
Method: EPA 8015M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-003-1,012	Aqueous	GC 15	05/29/02	05/29/02	02052905sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	106	100	67-128	6	0-21	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: Extraction
Method: EPA 418.1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-36	Aqueous	IR #1	05/29/02	05/30/02	02052905sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TRPH	105	95	70-130	10	0-30	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 3510B
Method: EPA 8270C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-1,031	Aqueous	GC/MS Y	05/30/02	05/30/02	0205302

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	35	38	12-151	9	0-23	
2-Chlorophenol	69	74	45-135	7	0-18	
1,4-Dichlorobenzene	100	98	36-118	2	0-26	
N-Nitroso-di-n-propylamine	99	95	52-128	4	0-13	
1,2,4-Trichlorobenzene	104	101	42-120	4	0-21	
4-Chloro-3-Methylphenol	89	88	20-150	1	0-40	
Acenaphthene	115	110	51-137	5	0-11	
4-Nitrophenol	38	38	20-150	1	0-40	
2,4-Dinitrotoluene	81	81	25-143	0	0-36	
Pentachlorophenol	54	48	20-150	10	0-40	
Pyrene	130	126	45-135	3	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8260B

Project: NBR / HR0656-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-05-1181-64	Aqueous	GC/MS U	N/A	05/31/02	0205118164

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	111	111	72-127	1	0-25	
Carbon Tetrachloride	109	110	70-130	1	0-25	
Chlorobenzene	109	109	72-131	0	0-25	
1,2-Dichlorobenzene	108	110	70-130	2	0-25	
1,1-Dichloroethene	102	104	69-127	2	0-25	
Toluene	108	107	75-124	1	0-25	
Trichloroethene	109	111	60-137	2	0-25	
Vinyl Chloride	110	111	70-130	1	0-25	
Methyl-t-Butyl Ether (MTBE)	113	114	80-120	1	0-25	
Ethanol	115	114	60-140	1	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648-2460

Project: NBR / HR0656-02

Date Received: 05/29/02
Work Order No: 02-05-1305
Preparation: EPA 5030B
Method: EPA 8260B

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-5,296	Aqueous	GC/MS U	N/A	05/31/02	053002BW

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	110	111	72-127	0	0-25	
Carbon Tetrachloride	109	109	70-130	0	0-25	
Chlorobenzene	108	109	72-131	1	0-25	
1,2-Dichlorobenzene	107	107	70-130	0	0-25	
1,1-Dichloroethene	107	108	69-127	1	0-25	
Toluene	110	111	75-124	1	0-25	
Trichloroethene	110	111	60-137	2	0-25	
Vinyl Chloride	112	111	79-118	1	0-25	
Methyl-t-Butyl Ether (MTBE)	111	112	80-120	1	0-25	
Tert-Butyl Alcohol (TBA)	114	116	60-140	2	0-25	
Diisopropyl Ether (DIPE)	111	112	60-140	0	0-25	
Ethyl-t-Butyl Ether (ETBE)	109	110	60-140	1	0-25	
Tert-Amyl-Methyl Ether (TAME)	112	114	60-140	2	0-25	
Ethanol	117	115	60-140	2	0-25	

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 02-05-1305

Qualifier	Definition
3	Spike or Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
ND	Not detected at indicated reporting limit.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

CALSCIENCE ENVIRONMENTAL LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date 5/29/02

Page 1 of 1

LABORATORY CLIENT: GEOSYNTEC CONSULTANTS
ADDRESS: 2100 MAIN STREET, #150
CITY: HUNTINGTON BEACH STATE: CA ZIP: 92648
TEL: 714 969-0800 FAX: -0820 E-MAIL: esmalstig@geosyntec.com

CLIENT PROJECT NAME / NUMBER: NBR / HR0656-02
PROJECT CONTACT: ERIC SMALSTIG
SAMPLER(S): (SIGNATURE) EDM
COELT LOG CODE
P.O. NO.:
LAB USE ONLY 05-1305
COOLER RECEIPT TEMP = °C

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☑ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ COELT REPORTING

SPECIAL INSTRUCTIONS:
48-hr TURN
WATCH OUT FOR RUNNING INK ON LABELS (KEEP SET TOGETHER)

REQUESTED ANALYSES

LAB USE ONLY	GEIMS ID	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or 8015M (CC)	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	VOCs (5035 / 8260B) EnCore	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EDB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	418.1 TRPH	
		GW1-DRILLSITE	5/29/02	2:45 PM	GW	1														X	
			"			2	X														
						1		X													
						1															X
						1											X				
						1							X								
						3					X										

Relinquished by: (Signature) EDM	Received by: (Signature) Eric Bermudez	Date: 5/29/02	Time: 15:20
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature) Eric Bermudez	Received for Laboratory by: (Signature) Lodeyne Martin	Date: 5/29/02	Time: 16:00

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

09/10/01 Revision

Q&Q Graphic (714) 898-9702

Calscience
Environmental
Laboratories, Inc.

June 15, 2001

Eric Smalstig
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Subject: **Calscience Work Order No.:** **01-06-0506**
Client Reference: **Banning Ranch/HR0575-03**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/11/01 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

William H. Christensen
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Attn: Eric Smalstig
RE: Banning Ranch/HR0575-03

Date Sampled:	06/11/01
Date Received:	06/11/01
Date Extracted:	06/12/01
Date Analyzed:	06/12/01
Work Order No.:	01-06-0506
Method:	EPA 418.1
Page 1 of 1	

All total recoverable petroleum hydrocarbon concentrations are reported in mg/L (ppm).

Sample Number	Concentration	Reporting Limit
02-GW-005	ND	1.0
02-GW-004	ND	1.0
08-GW-001	ND	1.0
Method Blank	ND	1.0

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 150.1

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-005	01-06-0506-1	Aqueous	06/11/01	N/A	06/11/01	0611PHDUP1

Parameter	Result	RL	DF	Qual	Units
pH	6.86	0.01	1		pH UNIT

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-004	01-06-0506-2	Aqueous	06/11/01	N/A	06/11/01	0611PHDUP1

Parameter	Result	RL	DF	Qual	Units
pH	6.96	0.01	1		pH UNIT

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
08-GW-001	01-06-0506-3	Aqueous	06/11/01	N/A	06/11/01	0611PHDUP1

rameter	Result	RL	DF	Qual	Units
pH	6.95	0.01	1		pH UNIT

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 300.0

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-005	01-06-0506-1	06/11/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	1800	500	500	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	290	100	100	D	mg/L

02-GW-004	01-06-0506-2	06/11/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	750	100	100	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	380	100	100	D	mg/L

GW-001	01-06-0506-3	06/11/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	5400	2000	2000	D	mg/L	Nitrate-N	ND	10	100		mg/L
Nitrite-N	ND	10	100		mg/L	Sulfate	150	100	100		mg/L

Method Blank	099-05-118-16	N/A	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	ND	1.0	1		mg/L	Nitrate-N	ND	0.10	1		mg/L
Nitrite-N	ND	0.10	1		mg/L	Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: Total Digestion
Method: EPA 6010B / EPA 7470A

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-005	01-06-0506-1	06/11/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/12/01 2:35:32 PM with batch 010611lcs7

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	0.0182	0.0050	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.0688	0.0100	1		mg/L	Silver	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Vanadium	ND	0.00500	1		mg/L
Chromium (Total)	ND	0.00500	1		mg/L	Zinc	0.0242	0.0100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Calcium	203	1	10	D	mg/L
Copper	ND	0.00500	1		mg/L	Iron	3.64	0.10	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	107	1	10	D	mg/L
Mercury	ND	0.00050	1		mg/L	Manganese	1.44	0.00500	1		mg/L
Molybdenum	0.0567	0.0050	1		mg/L	Sodium	1350	5	10	D	mg/L

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
-GW-004	01-06-0506-2	06/11/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/12/01 2:20:22 PM with batch 010611lcs7

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	ND	0.00500	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.107	0.010	1		mg/L	Silver	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Vanadium	ND	0.00500	1		mg/L
Chromium (Total)	ND	0.00500	1		mg/L	Zinc	0.154	0.010	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Calcium	93.8	0.1	1		mg/L
Copper	ND	0.00500	1		mg/L	Iron	ND	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	58.6	0.1	1		mg/L
Mercury	ND	0.00050	1		mg/L	Manganese	0.198	0.005	1		mg/L
Molybdenum	0.0240	0.0050	1		mg/L	Sodium	746	5	10	D	mg/L

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Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: Total Digestion
Method: EPA 6010B / EPA 7470A

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
08-GW-001	01-06-0506-3	06/11/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/12/01 2:38:32 PM with batch 010611lcs7

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	0.00537	0.0050	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.114	0.010	1		mg/L	Silver	ND	0.0050	1		mg/L
Beryllium	ND	0.0010	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.0050	1		mg/L	Vanadium	0.0605	0.0050	1		mg/L
Chromium (Total)	0.0108	0.0050	1		mg/L	Zinc	0.0355	0.0100	1		mg/L
Cobalt	ND	0.0050	1		mg/L	Calcium	228	1	10	D	mg/L
Copper	ND	0.0050	1		mg/L	Iron	0.210	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	298	1	10	D	mg/L
Mercury	ND	0.0005	1		mg/L	Manganese	1.35	0.0050	1		mg/L
Molybdenum	0.00790	0.0050	1		mg/L	Sodium	4580	50	100	D	mg/L

thod Blank	099-04-008-559	N/A	Aqueous	06/11/01	06/12/01	010611lcs7

Parameter	Result	RL	DF	Qual	Units
Mercury	ND	0.00050	1		mg/L

Method Blank	097-01-003-1,775	N/A	Aqueous	06/11/01	06/12/01	010611lcs7

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Silver	ND	0.00500	1		mg/L
Barium	ND	0.0100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Vanadium	ND	0.00500	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Zinc	ND	0.0100	1		mg/L
Chromium (Total)	ND	0.00500	1		mg/L	Calcium	ND	0.100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Iron	ND	0.100	1		mg/L
Copper	ND	0.00500	1		mg/L	Magnesium	ND	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Manganese	ND	0.00500	1		mg/L
Molybdenum	ND	0.00500	1		mg/L	Sodium	ND	0.500	1		mg/L
Nickel	ND	0.00500	1		mg/L						

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Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 5030B
Method: EPA 8015M

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-005	01-06-0506-1	Aqueous	06/11/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	93	49-157	

02-GW-004	01-06-0506-2	Aqueous	06/11/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

urrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	71	49-157	

08-GW-001	01-06-0506-3	Aqueous	06/11/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	91	49-157	

Method Blank	098-03-006-1,471	Aqueous	N/A	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	93	49-157	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/11/01
2100 Main Street, Suite 150	Date Received:	06/11/01
Huntington Beach, CA 92648	Date Extracted:	06/12/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0506
Attn: Eric Smalstig	Method:	EPA 8310
RE: Banning Ranch/HR0575-03	Page 1 of 4	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 02-GW-005		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/11/01
2100 Main Street, Suite 150	Date Received:	06/11/01
Huntington Beach, CA 92648	Date Extracted:	06/12/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0506
Attn: Eric Smalstig	Method:	EPA 8310
RE: Banning Ranch/HR0575-03	Page 2 of 4	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 02-GW-004		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Attn: Eric Smalstig
RE: Banning Ranch/HR0575-03

Date Sampled: 06/11/01
Date Received: 06/11/01
Date Extracted: 06/12/01
Date Analyzed: 06/12/01
Work Order No.: 01-06-0506
Method: EPA 8310

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 08-GW-001		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Attn: Eric Smalstig
RE: Banning Ranch/HR0575-03

Date Sampled:	N/A
Date Received:	N/A
Date Extracted:	06/12/01
Date Analyzed:	06/12/01
Work Order No.:	01-06-0506
Method:	EPA 8310
Page 4 of 4	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: Method Blank		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 3510B
Method: EPA 8270C

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-005	01-06-0506-1	06/11/01	Aqueous	06/12/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
ethylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
oso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	71	15-138		Phenol-d6	52	17-141	
Nitrobenzene-d5	94	56-123		2-Fluorobiphenyl	90	45-120	
6-Tribromophenol	116	32-143		p-Terphenyl-d14	100	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 3520B
Method: EPA 8270C

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-004	01-06-0506-2	06/11/01	Aqueous	06/12/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
oso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	67	15-138		Phenol-d6	46	17-141	
Nitrobenzene-d5	93	56-123		2-Fluorobiphenyl	88	45-120	
6-Tribromophenol	114	32-143		p-Terphenyl-d14	102	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 3520B
Method: EPA 8270C

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
08-GW-001	01-06-0506-3	06/11/01	Aqueous	06/12/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
`Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
oso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	70	15-138		Phenol-d6	54	17-141	
Nitrobenzene-d5	90	56-123		2-Fluorobiphenyl	85	45-120	
2,4,6-Tribromophenol	109	32-143		p-Terphenyl-d14	87	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 3510B
Method: EPA 8270C

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**095-01-003-787**	**N/A**	**Aqueous**	**06/11/01**	**06/11/01**	**0106113**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
ethylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
oso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	71	15-138		Phenol-d6	52	17-141	
Nitrobenzene-d5	86	56-123		2-Fluorobiphenyl	71	45-120	
2,4,6-Tribromophenol	92	32-143		p-Terphenyl-d14	82	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 8260B

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-005	01-06-0506-1	06/11/01	Aqueous	N/A	06/12/01	061201AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	10	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
ɔn Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
ɔn Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	99	86-118		Toluene-d8	100	88-110	
1,4-Bromofluorobenzene	104	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 8260B

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-004	01-06-0506-2	06/11/01	Aqueous	N/A	06/12/01	061201AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	91	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]bon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]n Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
C[illegible]orobenzene	ND	1.0	1		ug/L	Styrene	2.5	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	86-118		Toluene-d8	99	88-110	
1,4-Bromofluorobenzene	104	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 8260B

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
08-GW-001	01-06-0506-3	06/11/01	Aqueous	N/A	06/12/01	061201AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	25	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]on Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]n Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
[illegible]robenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	99	86-118		Toluene-d8	100	88-110	
1,4-Bromofluorobenzene	104	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 8260B

Project: Banning Ranch/HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**099-10-006-2,602**	**N/A**	**Aqueous**	**N/A**	**06/12/01**	**061201AW**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]hon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]n Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
C[illegible]orobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	86-118		Toluene-d8	99	88-110	
1,4-Bromofluorobenzene	104	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Banning Ranch/HR0575-03

Date Received: 6/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 150.1

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
01-06-0459-1	Aqueous	PH 1	N/A	06/11/01	0611PHDUP1

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
pH	7.05	7.08	0	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 300.0

Project: Banning Ranch/HR0575-03

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0459-3	Aqueous	IC 2	N/A	06/11/01	010611A

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chloride	98	97	50-150	1	0-25	
Nitrite-N	85	86	50-150	1	0-25	
Nitrate-N	91	92	50-150	1	0-25	
Sulfate	95	95	50-150	1	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Banning Ranch/HR0575-03

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 300.0

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-118-16	Aqueous	IC 2	N/A	06/11/01	010611

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chloride	92	92	80-120	0	0-25	
Nitrite-N	89	94	80-120	5	0-25	
Nitrate-N	95	95	80-120	0	0-25	
Sulfate	99	99	80-120	1	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: Total Digestion
Method: EPA 6010B

Project: Banning Ranch/HR0575-03

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0459-1	Aqueous	ICP 3300	06/11/01	06/12/01	061101ms7

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	106	111	80-120	5	0-20	
Arsenic	105	110	80-120	4	0-20	
Barium	95	101	80-120	5	0-20	
Beryllium	100	106	80-120	6	0-20	
Cadmium	95	100	80-120	5	0-20	
Chromium (Total)	97	102	80-120	5	0-20	
Cobalt	96	100	80-120	5	0-20	
Copper	109	115	80-120	5	0-20	
Lead	91	95	80-120	4	0-20	
Molybdenum	99	104	80-120	5	0-20	
Nickel	93	98	80-120	5	0-20	
Selenium	101	106	80-120	4	0-20	
Silver	106	111	80-120	5	0-20	
Thallium	86	90	80-120	4	0-20	
Vanadium	100	106	80-120	5	0-20	
Zinc	99	104	80-120	4	0-20	
Calcium	4X	4X	80-120	4X	0-20	Q
Iron	92	104	80-120	9	0-20	
Magnesium	4X	4X	80-120	4X	0-20	Q
Manganese	91	98	80-120	5	0-20	
Sodium	4X	4X	80-120	4X	0-20	Q

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: Total Digestion
Method: EPA 7470A

Project: Banning Ranch/HR0575-03

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-GW-004	Aqueous	Mercury	06/11/01	06/12/01	061101ms7

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	82	80	71-134	2	0-14	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Banning Ranch/HR0575-03

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: Total Digestion
Method: EPA 6010B

LCS Sample Number	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
097-01-003-1,775	Aqueous	ICP 3300	06/12/01	010611-I	010611lcs7

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Antimony	1.00	0.942	94	80-120	
Arsenic	1.00	0.900	90	80-120	
Barium	1.00	0.989	99	80-120	
Beryllium	1.00	0.991	99	80-120	
Cadmium	1.00	1.02	102	80-120	
Chromium (Total)	1.00	0.994	99	80-120	
Cobalt	1.00	1.04	104	80-120	
Copper	1.00	0.996	100	80-120	
Lead	1.00	0.983	98	80-120	
Molybdenum	1.00	0.995	100	80-120	
Nickel	1.00	1.02	102	80-120	
Selenium	1.00	0.970	97	80-120	
Silver	0.500	0.492	98	80-120	
Thallium	1.00	0.994	99	80-120	
Vanadium	1.00	0.993	99	80-120	
Zinc	1.00	1.03	103	80-120	
Calcium	1.00	1.04	104	80-120	
Iron	1.00	1.02	102	80-120	
Magnesium	1.00	1.03	103	80-120	
Manganese	1.00	0.992	99	80-120	
Sodium	10	11.3	113	80-120	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Banning Ranch/HR0575-03

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: Total Digestion
Method: EPA 7470A

LCS Sample Number	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-04-008-559	Aqueous	Mercury	06/12/01	0106111	010611lcs7

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Mercury	0.0100	0.0109	109	90-122	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 5030B
Method: EPA 8015M

Project: Banning Ranch/HR0575-03

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0665-1	Aqueous	GC 1	N/A	06/14/01	01061401ms

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	104	99	72-120	4	0-21	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 5030B
Method: EPA 8015M

Project: Banning Ranch/HR0575-03

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-006-1,471	Aqueous	GC 1	N/A	06/14/01	01061401sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	106	110	81-123	3	0-17	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 3510B
Method: EPA 8270C

Project: Banning Ranch/HR0575-03

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0451-9	Aqueous	GC/MS H	06/11/01	06/11/01	010604519

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	43	43	12-151	2	0-23	
2-Chlorophenol	95	93	45-135	2	0-18	
1,4-Dichlorobenzene	92	89	36-118	2	0-26	
N-Nitroso-di-n-propylamine	95	92	52-128	4	0-13	
1,2,4-Trichlorobenzene	104	98	42-120	6	0-21	
4-Chloro-3-Methylphenol	106	100	20-150	6	0-40	
Acenaphthene	97	94	51-137	3	0-11	
4-Nitrophenol	41	40	20-150	3	0-40	
2,4-Dinitrotoluene	95	91	25-143	5	0-36	
Pentachlorophenol	108	104	20-150	3	0-40	
Pyrene	99	101	45-135	2	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: EPA 3510B
Method: EPA 8270C

Project: Banning Ranch/HR0575-03

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-787	Aqueous	GC/MS H	06/11/01	06/11/01	0106113

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	58	62	12-151	5	0-23	
2-Chlorophenol	88	94	45-135	7	0-18	
1,4-Dichlorobenzene	84	86	36-118	3	0-26	
N-Nitroso-di-n-propylamine	92	93	52-128	1	0-13	
1,2,4-Trichlorobenzene	97	98	42-120	1	0-21	
4-Chloro-3-Methylphenol	100	102	20-150	2	0-40	
Acenaphthene	96	96	51-137	0	0-11	
4-Nitrophenol	47	57	20-150	19	0-40	
2,4-Dinitrotoluene	90	93	25-143	3	0-36	
Pentachlorophenol	91	105	20-150	14	0-40	
Pyrene	98	98	45-135	0	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 8260B

Project: Banning Ranch/HR0575-03

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-GW-005	Aqueous	GC/MS C	N/A	06/12/01	0106050601

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	101	72-127	1	0-25	
Carbon Tetrachloride	111	116	70-130	4	0-25	
Chlorobenzene	96	97	72-131	1	0-25	
1,2-Dichlorobenzene	102	100	70-130	2	0-25	
1,1-Dichloroethene	100	99	69-127	2	0-25	
Toluene	103	102	75-124	0	0-25	
Trichloroethene	101	101	60-137	1	0-25	
Vinyl Chloride	101	100	70-130	0	0-25	
Methyl-t-Butyl Ether (MTBE)	116	118	80-120	2	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/11/01
Work Order No: 01-06-0506
Preparation: N/A
Method: EPA 8260B

Project: Banning Ranch/HR0575-03

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-2,602	Aqueous	GC/MS C	N/A	06/12/01	061201AW

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	101	72-127	3	0-25	
Carbon Tetrachloride	101	100	70-130	1	0-25	
Chlorobenzene	99	99	72-131	0	0-25	
1,2-Dichlorobenzene	103	102	70-130	1	0-25	
1,1-Dichloroethene	110	100	69-127	10	0-25	
Toluene	103	101	75-124	2	0-25	
Trichloroethene	102	101	60-137	1	0-25	
Vinyl Chloride	100	92	79-118	8	0-25	
Methyl-t-Butyl Ether (MTBE)	111	101	80-120	9	0-25	

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 418.1

GeoSyntec Consultants
Page 1 of 1

Work Order No.: 01-06-0506
Date Analyzed: 06/12/01

LCS/LCS Duplicate

Analyte	LCS%REC	LCSD%REC	Control Limits	%RPD	Control Limits
Total Recoverable Petroleum Hydrocarbons	100	100	70 - 130	0	0 - 30

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8310

GeoSyntec Consultants | Work Order No.: 01-06-0506
Page 1 of 1 | Date Analyzed: 06/12/01

LCS/LCS Duplicate

Analyte	LCS%REC	LCSD%REC	Control Limits	%RPD	Control Limits
Benzo (b) Fluoranthene	88	91	40 - 160	3	0 - 20
Benzo (k) Fluoranthene	90	92	40 - 160	2	0 - 20
Benzo (a) Pyrene	60	61	40 - 160	2	0 - 20
Indeno (1,2,3-c,d) Pyrene	74	79	40 - 160	5	0 - 20
Dibenzo (a,h) Anthracene	91	100	40 - 160	9	0 - 20
Benzo (g,h,i) Perylene	86	76	40 - 160	12	0 - 20

Surrogate Recoveries (in %)

Sample Number	S1
02-GW-005	76
02-GW-004	73
08-GW-001	82
Method Blank	62

Surrogate Compound	%REC Acceptable Limits
S1 > Decafluorobiphenyl	10 - 129

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 01-06-0506

Qualifier	Definition
D	The sample data was reported from a diluted analysis.
ND	Not detected at indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the sample concentration exceeding the spike concentration by a factor of four or greater.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

CALSCIENCE CHANGE ORDER

ORDER: 01-06-0459, 01-06-0506, 01-06-0540
PROJECT: HR0575-03

CHANGE:

Add 8015 gas on all samples in the referenced work orders on a 24 hr TAT. Will be due 6/15/01.

REQUESTED BY:

Eric Smalstig - GeoSyntec
fax: 969-0820

Approved by Client: [signature]
Date: 13 JUNE 01

Sign, date & fax back to 894-7501

FROM: S. Nowak **DATE:** 6/13/01 1800 hrs.

BORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date June 11, 2

Page 1 of 1

LABORATORY CLIENT: GeoSyntec Consultants
ADDRESS: 2100 Main Street Suite 150
CITY: Huntington Beach STATE: CA ZIP: 92648
TEL: (714) 969-0800 FAX: (714) 969-0820 E-MAIL:

CLIENT PROJECT NAME / NUMBER: Banning Ranch / HR0575-03
PROJECT CONTACT: Eric Smalstig
SAMPLER(S): (SIGNATURE) Brian Hendron / Brian Hendron

P.O. NO.: HR0575-03
LAB USE ONLY 06-0506
COOLER RECEIPT TEMP = _____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___.

SPECIAL INSTRUCTIONS Samples preserved w/ ice until delivered to Lab.

Results requested by June 13, 2001 @ 1700

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	VOCs (5035 / 8260B) EnCore	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EOB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	TRPH	PAH	METALS	GEN MINERALS
1	02-GW-005	Ø2	6/11/01	1030	WATER	8					3		1									1	1	1	1
2	02-GW-004	Ø2		1220		8					3		1									1	1	1	1
3	08-GW-001	Ø8 (BNI)		1415		8					3		1									1	1	1	1
~~—~~	~~06-GW-001~~	~~Ø6~~				8					3		1									1	1	1	1
~~—~~	~~06-GW-001 MS/MSD~~	MATRIX SPIKE ~~BBK~~				8					3		1									1	1	1	1

Relinquished by: (Signature) Brian Hendron — Received by: (Signature) — Date: — Time:

Relinquished by: (Signature) — Received by: (Signature) — Date: — Time:

Relinquished by: (Signature) — Received for Laboratory by: (Signature) — Date: 6/11/a — Time: 1615

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively

10/01/00 Revision

Q&Q Graphic (714) 898-9702

Calscience
Environmental
Laboratories, Inc.

June 15, 2001

Eric Smalstig
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Subject: **Calscience Work Order No.:** **01-06-0459**
Client Reference: **HR0575-3**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/9/01 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

William H. Christensen
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants		Date Sampled:	06/09/01
2100 Main Street, Suite 150		Date Received:	06/09/01
Huntington Beach, CA 92648		Date Extracted:	06/12/01
		Date Analyzed:	06/12/01
		Work Order No.:	01-06-0459
Attn: Eric Smalstig		Method:	EPA 418.1
RE: HR0575-3		Page 1 of 1	

All total recoverable petroleum hydrocarbon concentrations are reported in mg/L (ppm).

Sample Number	Concentration	Reporting Limit
01-GW-001	ND	1.0
01-GW-002	ND	1.0
01-GW-003	ND	1.0
02-GW-001	ND	1.0
02-GW-003	ND	1.0
Method Blank	ND	1.0

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 150.1

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-0459-1	Aqueous	06/09/01	N/A	06/11/01	0611PHDUP1

Parameter	Result	RL	DF	Qual	Units
pH	7.05	0.01	1		pH UNIT

01-GW-002	01-06-0459-2	Aqueous	06/09/01	N/A	06/11/01	0611PHDUP1

Parameter	Result	RL	DF	Qual	Units
pH	7.1	0.01	1		pH UNIT

01-GW-003	01-06-0459-3	Aqueous	06/09/01	N/A	06/11/01	0611PHDUP1

rameter	Result	RL	DF	Qual	Units
pH	7.48	0.01	1		pH UNIT

02-GW-001	01-06-0459-4	Aqueous	06/09/01	N/A	06/11/01	0611PHDUP1

Parameter	Result	RL	DF	Qual	Units
pH	6.97	0.01	1		pH UNIT

02-GW-003	01-06-0459-5	Aqueous	06/09/01	N/A	06/11/01	0611PHDUP1

Parameter	Result	RL	DF	Qual	Units
pH	7.06	0.01	1		pH UNIT

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 300.0

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-0459-1	06/09/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	1700	500	500	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	630	100	100	D	mg/L

01-GW-002	01-06-0459-2	06/09/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	2300	500	500	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	1300	500	500	D	mg/L

GW-003	01-06-0459-3	06/09/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	1800	500	500	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	360	100	100	D	mg/L

02-GW-001	01-06-0459-4	06/09/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	13000	2000	2000	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	1200	500	500	D	mg/L

02-GW-003	01-06-0459-5	06/09/01	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	4000	500	500	D	mg/L	Nitrate-N	ND	1.0	10		mg/L
Nitrite-N	ND	1.0	10		mg/L	Sulfate	31	10	10		mg/L

Method Blank	099-05-118-16	N/A	Aqueous	N/A	06/11/01	010611

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Chloride	ND	1.0	1		mg/L	Nitrate-N	ND	0.10	1		mg/L
Nitrite-N	ND	0.10	1		mg/L	Sulfate	ND	1.0	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 6010B / EPA 7470A

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-0459-1	06/09/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/11/01 5:47:31 PM with batch 010611lcs1

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	0.00558	0.00500	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.0487	0.0100	1		mg/L	Silver	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Vanadium	0.0704	0.0050	1		mg/L
Chromium (Total)	0.00617	0.00500	1		mg/L	Zinc	0.0757	0.0100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Calcium	208	1	10	D	mg/L
Copper	0.00667	0.00500	1		mg/L	Iron	0.314	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	142	1	10	D	mg/L
Mercury	ND	0.00050	1		mg/L	Manganese	0.526	0.005	1		mg/L
Molybdenum	0.00665	0.00500	1		mg/L	Sodium	1530	5	10	D	mg/L

GW-002		01-06-0459-2			06/09/01	Aqueous	06/11/01	06/12/01			010611lcs7

Comment(s): Mercury was analyzed on 6/11/01 5:50:34 PM with batch 010611lcs1

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	0.0116	0.0050	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.220	0.010	1		mg/L	Silver	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Vanadium	0.0616	0.0050	1		mg/L
Chromium (Total)	0.00566	0.00500	1		mg/L	Zinc	0.0443	0.0100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Calcium	290	1	10	D	mg/L
Copper	0.00735	0.00500	1		mg/L	Iron	0.328	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	215	1	10	D	mg/L
Mercury	ND	0.00050	1		mg/L	Manganese	0.675	0.005	1		mg/L
Molybdenum	0.00702	0.00500	1		mg/L	Sodium	2000	5	10	D	mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 6010B / EPA 7470A

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-003	01-06-0459-3	06/09/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/11/01 5:53:38 PM with batch 010611lcs1

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	0.0156	0.0050	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.0746	0.0100	1		mg/L	Silver	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Vanadium	0.0881	0.0050	1		mg/L
Chromium (Total)	0.00507	0.00500	1		mg/L	Zinc	0.0344	0.0100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Calcium	115	1	10	D	mg/L
Copper	0.0219	0.0050	1		mg/L	Iron	0.240	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	156	1	10	D	mg/L
Mercury	ND	0.00050	1		mg/L	Manganese	0.305	0.005	1		mg/L
Molybdenum	ND	0.00500	1		mg/L	Sodium	1440	5	10	D	mg/L

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
GW-001	01-06-0459-4	06/09/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/11/01 5:56:43 PM with batch 010611lcs1

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	0.00512	0.0050	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	0.279	0.010	1		mg/L	Silver	ND	0.0050	1		mg/L
Beryllium	ND	0.0010	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.0050	1		mg/L	Vanadium	0.00704	0.0050	1		mg/L
Chromium (Total)	0.00637	0.0050	1		mg/L	Zinc	0.0661	0.0100	1		mg/L
Cobalt	ND	0.0050	1		mg/L	Calcium	434	1	10	D	mg/L
Copper	ND	0.0050	1		mg/L	Iron	8.09	0.10	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	754	1	10	D	mg/L
Mercury	ND	0.0005	1		mg/L	Manganese	1.60	0.0050	1		mg/L
Molybdenum	0.0250	0.0050	1		mg/L	Sodium	6230	50	100	D	mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 6010B / EPA 7470A

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-0459-5	06/09/01	Aqueous	06/11/01	06/12/01	010611lcs7

Comment(s): Mercury was analyzed on 6/11/01 5:59:48 PM with batch 010611lcs1

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Nickel	ND	0.00500	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Barium	1.81	0.01	1		mg/L	Silver	ND	0.00500	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Vanadium	0.0317	0.0050	1		mg/L
Chromium (Total)	0.00911	0.00500	1		mg/L	Zinc	0.0682	0.0100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Calcium	115	1	10	D	mg/L
Copper	ND	0.00500	1		mg/L	Iron	1.05	0.10	1		mg/L
Lead	ND	0.0100	1		mg/L	Magnesium	239	1	10	D	mg/L
Mercury	ND	0.00050	1		mg/L	Manganese	0.298	0.005	1		mg/L
Molybdenum	ND	0.00500	1		mg/L	Sodium	2780	5	10	D	mg/L

Method Blank	099-04-008-558	N/A	Aqueous	06/11/01	06/11/01	010611lcs1

Parameter	Result	RL	DF	Qual	Units
Mercury	ND	0.00050	1		mg/L

Method Blank	097-01-003-1,775	N/A	Aqueous	06/11/01	06/12/01	010611lcs7

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Antimony	ND	0.0150	1		mg/L	Selenium	ND	0.0150	1		mg/L
Arsenic	ND	0.0150	1		mg/L	Silver	ND	0.00500	1		mg/L
Barium	ND	0.0100	1		mg/L	Thallium	ND	0.0150	1		mg/L
Beryllium	ND	0.00100	1		mg/L	Vanadium	ND	0.00500	1		mg/L
Cadmium	ND	0.00500	1		mg/L	Zinc	ND	0.0100	1		mg/L
Chromium (Total)	ND	0.00500	1		mg/L	Calcium	ND	0.100	1		mg/L
Cobalt	ND	0.00500	1		mg/L	Iron	ND	0.100	1		mg/L
Copper	ND	0.00500	1		mg/L	Magnesium	ND	0.100	1		mg/L
Lead	ND	0.0100	1		mg/L	Manganese	ND	0.00500	1		mg/L
Molybdenum	ND	0.00500	1		mg/L	Sodium	ND	0.500	1		mg/L
Nickel	ND	0.00500	1		mg/L						

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Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 5030B
Method: EPA 8015M

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-0459-1	Aqueous	06/09/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	49-157	

01-GW-002	01-06-0459-2	Aqueous	06/09/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

urrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	89	49-157	

01-GW-003	01-06-0459-3	Aqueous	06/09/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	86	49-157	

02-GW-001	01-06-0459-4	Aqueous	06/09/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	49-157	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 5030B
Method: EPA 8015M

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-0459-5	Aqueous	06/09/01	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	91	49-157	

Method Blank	098-03-006-1,471	Aqueous	N/A	N/A	06/14/01	01061401sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	93	49-157	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience
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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/09/01
2100 Main Street, Suite 150	Date Received:	06/09/01
Huntington Beach, CA 92648	Date Extracted:	06/11/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0459
Attn: Eric Smalstig	Method:	EPA 8310
RE: HR0575-3	Page 1 of 6	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 01-GW-001		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/09/01
2100 Main Street, Suite 150	Date Received:	06/09/01
Huntington Beach, CA 92648	Date Extracted:	06/11/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0459
Attn: Eric Smalstig	Method:	EPA 8310
RE: HR0575-3	Page 2 of 6	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 01-GW-002		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/09/01
2100 Main Street, Suite 150	Date Received:	06/09/01
Huntington Beach, CA 92648	Date Extracted:	06/11/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0459
Attn: Eric Smalstig	Method:	EPA 8310
RE: HR0575-3	Page 3 of 6	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 01-GW-003		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/09/01
2100 Main Street, Suite 150	Date Received:	06/09/01
Huntington Beach, CA 92648	Date Extracted:	06/11/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0459
Attn: Eric Smalstig	Method:	EPA 8310
RE: HR0575-3	Page 4 of 6	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 02-GW-001		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

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ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/09/01
2100 Main Street, Suite 150	Date Received:	06/09/01
Huntington Beach, CA 92648	Date Extracted:	06/11/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0459
Attn: Eric Smalstig	Method:	EPA 8310
RE: HR0575-3	Page 5 of 6	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 02-GW-003		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	NA
2100 Main Street, Suite 150	Date Received:	NA
Huntington Beach, CA 92648	Date Extracted:	06/11/01
	Date Analyzed:	06/12/01
	Work Order No.:	01-06-0459
Attn: Eric Smalstig	Method:	EPA 8310
RE: HR0575-3	Page 6 of 6	

All concentrations are reported in µg/L (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: Method Blank		
Naphthalene	ND	1.0
Acenaphthylene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	1.0
Phenanthrene	ND	1.0
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	1.0
Benzo (a) Anthracene	ND	1.0
Chrysene	ND	1.0
Benzo (b) Fluoranthene	ND	1.0
Benzo (k) Fluoranthene	ND	1.0
Benzo (a) Pyrene	ND	0.2
Indeno (1,2,3-c,d) Pyrene	ND	1.0
Dibenzo (a,h) Anthracene	ND	1.0
Benzo (g,h,i) Perylene	ND	1.0

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-0459-1	06/09/01	Aqueous	06/11/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
'ethylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
roso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	57	15-138		Phenol-d6	41	17-141	
Nitrobenzene-d5	72	56-123		2-Fluorobiphenyl	65	45-120	
2,4,6-Tribromophenol	95	32-143		p-Terphenyl-d14	79	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-002	01-06-0459-2	06/09/01	Aqueous	06/11/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
[illegible]Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
[illegible]roso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	61	15-138		Phenol-d6	40	17-141	
Nitrobenzene-d5	91	56-123		2-Fluorobiphenyl	83	45-120	
2,4,6-Tribromophenol	119	32-143		p-Terphenyl-d14	103	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-003	01-06-0459-3	06/09/01	Aqueous	06/11/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
ethylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
roso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	64	15-138		Phenol-d6	44	17-141	
Nitrobenzene-d5	88	56-123		2-Fluorobiphenyl	78	45-120	
6-Tribromophenol	113	32-143		p-Terphenyl-d14	95	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-001	01-06-0459-4	06/09/01	Aqueous	06/11/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
oso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
achloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	63	15-138		Phenol-d6	50	17-141	
Nitrobenzene-d5	93	56-123		2-Fluorobiphenyl	83	45-120	
2,4,6-Tribromophenol	119	32-143		p-Terphenyl-d14	99	46-133	

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-0459-5	06/09/01	Aqueous	06/11/01	06/12/01	0106113

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
*Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
roso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	62	15-138		Phenol-d6	41	17-141	
Nitrobenzene-d5	85	56-123		2-Fluorobiphenyl	73	45-120	
2,4,6-Tribromophenol	107	32-143		p-Terphenyl-d14	89	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**095-01-003-787**	**N/A**	**Aqueous**	**06/11/01**	**06/11/01**	**0106113**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
roso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
achloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	71	15-138		Phenol-d6	52	17-141	
Nitrobenzene-d5	86	56-123		2-Fluorobiphenyl	71	45-120	
2,4,6-Tribromophenol	92	32-143		p-Terphenyl-d14	82	46-133	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-0459-1	06/09/01	Aqueous	N/A	06/11/01	061101AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	100	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
›n Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
›n Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	3.3	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	1.8	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	93	86-118		Toluene-d8	108	88-110	
1,4-Bromofluorobenzene	105	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-002	01-06-0459-2	06/09/01	Aqueous	N/A	06/11/01	061101AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	32	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]on Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible] on Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	4.4	0.5	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	1.4	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	86-118		Toluene-d8	105	88-110	
1,4-Bromofluorobenzene	105	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-003	01-06-0459-3	06/09/01	Aqueous	N/A	06/12/01	061101BW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	1.1	0.5	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	100	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]on Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]on Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
[illegible]lorobenzene	ND	1.0	1		ug/L	Styrene	2.9	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	2.5	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	86-118		Toluene-d8	106	88-110	
1,4-Bromofluorobenzene	105	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-001	01-06-0459-4	06/09/01	Aqueous	N/A	06/11/01	061101AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	56	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]on Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]n Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
[illegible]lorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	98	86-118		Toluene-d8	105	88-110	
1,4-Bromofluorobenzene	105	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-0459-5	06/09/01	Aqueous	N/A	06/11/01	061101AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	28	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]bon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]on Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
[illegible]orobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	1.3	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	86-118		Toluene-d8	106	88-110	
1,4-Bromofluorobenzene	104	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**099-10-006-2,591**	**N/A**	**Aqueous**	**N/A**	**06/12/01**	**061101BW**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]on Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]n Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
[illegible]orobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	98	86-118		Toluene-d8	103	88-110	
1,4-Bromofluorobenzene	103	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**099-10-006-2,592**	**N/A**	**Aqueous**	**N/A**	**06/11/01**	**061101AW**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
Carbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
Carbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	95	86-118		Toluene-d8	105	88-110	
1,4-Bromofluorobenzene	104	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 6/9/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 150.1

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
01-GW-001	Aqueous	PH 1	N/A	06/11/01	0611PHDUP1

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
pH	7.05	7.08	0	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 300.0

Project: HR0575-3

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-GW-003	Aqueous	IC 2	N/A	06/11/01	010611A

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chloride	98	97	50-150	1	0-25	
Nitrite-N	85	86	50-150	1	0-25	
Nitrate-N	91	92	50-150	1	0-25	
Sulfate	95	95	50-150	1	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 300.0

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-118-16	Aqueous	IC 2	N/A	06/11/01	010611

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chloride	92	92	80-120	0	0-25	
Nitrite-N	89	94	80-120	5	0-25	
Nitrate-N	95	95	80-120	0	0-25	
Sulfate	99	99	80-120	1	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 6010B

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-GW-001	Aqueous	ICP 3300	06/11/01	06/12/01	061101ms7

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	106	111	80-120	5	0-20	
Arsenic	105	110	80-120	4	0-20	
Barium	95	101	80-120	5	0-20	
Beryllium	100	106	80-120	6	0-20	
Cadmium	95	100	80-120	5	0-20	
Chromium (Total)	97	102	80-120	5	0-20	
Cobalt	96	100	80-120	5	0-20	
Copper	109	115	80-120	5	0-20	
Lead	91	95	80-120	4	0-20	
Molybdenum	99	104	80-120	5	0-20	
Nickel	93	98	80-120	5	0-20	
Selenium	101	106	80-120	4	0-20	
Silver	106	111	80-120	5	0-20	
Thallium	86	90	80-120	4	0-20	
Vanadium	100	106	80-120	5	0-20	
Zinc	99	104	80-120	4	0-20	
Calcium	4X	4X	80-120	4X	0-20	Q
Iron	92	104	80-120	9	0-20	
Magnesium	4X	4X	80-120	4X	0-20	Q
Manganese	91	98	80-120	5	0-20	
Sodium	4X	4X	80-120	4X	0-20	Q

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 7470A

Project: HR0575-3

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0451-9	Aqueous	Mercury	06/11/01	06/11/01	061101ms1

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	96	92	71-134	4	0-14	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 6010B

LCS Sample Number	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
097-01-003-1,775	Aqueous	ICP 3300	06/12/01	010611-I	010611lcs7

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Antimony	1.00	0.942	94	80-120	
Arsenic	1.00	0.900	90	80-120	
Barium	1.00	0.989	99	80-120	
Beryllium	1.00	0.991	99	80-120	
Cadmium	1.00	1.02	102	80-120	
Chromium (Total)	1.00	0.994	99	80-120	
Cobalt	1.00	1.04	104	80-120	
Copper	1.00	0.996	100	80-120	
Lead	1.00	0.983	98	80-120	
Molybdenum	1.00	0.995	100	80-120	
Nickel	1.00	1.02	102	80-120	
Selenium	1.00	0.970	97	80-120	
Silver	0.500	0.492	98	80-120	
Thallium	1.00	0.994	99	80-120	
Vanadium	1.00	0.993	99	80-120	
Zinc	1.00	1.03	103	80-120	
Calcium	1.00	1.04	104	80-120	
Iron	1.00	1.02	102	80-120	
Magnesium	1.00	1.03	103	80-120	
Manganese	1.00	0.992	99	80-120	
Sodium	10	11.3	113	80-120	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: Total Digestion
Method: EPA 7470A

LCS Sample Number	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-04-008-558	Aqueous	Mercury	06/11/01	010611 I	010611lcs1

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Mercury	0.0100	0.00929	93	90-122	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 5030B
Method: EPA 8015M

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0665-1	Aqueous	GC 1	N/A	06/14/01	010614O1ms

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	104	99	72-120	4	0-21	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 5030B
Method: EPA 8015M

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-006-1,471	Aqueous	GC 1	N/A	06/14/01	01061401sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	106	110	81-123	3	0-17	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

Project: HR0575-3

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0451-9	Aqueous	GC/MS H	06/11/01	06/11/01	010604519

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	43	43	12-151	2	0-23	
2-Chlorophenol	95	93	45-135	2	0-18	
1,4-Dichlorobenzene	92	89	36-118	2	0-26	
N-Nitroso-di-n-propylamine	95	92	52-128	4	0-13	
1,2,4-Trichlorobenzene	104	98	42-120	6	0-21	
4-Chloro-3-Methylphenol	106	100	20-150	6	0-40	
Acenaphthene	97	94	51-137	3	0-11	
4-Nitrophenol	41	40	20-150	3	0-40	
2,4-Dinitrotoluene	95	91	25-143	5	0-36	
Pentachlorophenol	108	104	20-150	3	0-40	
Pyrene	99	101	45-135	2	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: EPA 3510B
Method: EPA 8270C

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-787	Aqueous	GC/MS H	06/11/01	06/11/01	0106113

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	58	62	12-151	5	0-23	
2-Chlorophenol	88	94	45-135	7	0-18	
1,4-Dichlorobenzene	84	86	36-118	3	0-26	
N-Nitroso-di-n-propylamine	92	93	52-128	1	0-13	
1,2,4-Trichlorobenzene	97	98	42-120	1	0-21	
4-Chloro-3-Methylphenol	100	102	20-150	2	0-40	
Acenaphthene	96	96	51-137	0	0-11	
4-Nitrophenol	47	57	20-150	19	0-40	
2,4-Dinitrotoluene	90	93	25-143	3	0-36	
Pentachlorophenol	91	105	20-150	14	0-40	
Pyrene	98	98	45-135	0	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0379-4	Aqueous	GC/MS T	N/A	06/12/01	01060379-4

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	102	72-127	6	0-25	
Carbon Tetrachloride	88	96	70-130	8	0-25	
Chlorobenzene	98	104	72-131	6	0-25	
1,2-Dichlorobenzene	99	105	70-130	6	0-25	
1,1-Dichloroethene	90	94	69-127	4	0-25	
Toluene	101	107	75-124	6	0-25	
Trichloroethene	93	99	60-137	6	0-25	
Vinyl Chloride	88	95	70-130	8	0-25	
Methyl-t-Butyl Ether (MTBE)	99	106	80-120	7	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

Project: HR0575-3

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0400-2	Aqueous	GC/MS T	N/A	06/11/01	01060400-2

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	102	72-127	7	0-25	
Carbon Tetrachloride	92	95	70-130	3	0-25	
Chlorobenzene	98	104	72-131	5	0-25	
1,2-Dichlorobenzene	100	105	70-130	5	0-25	
1,1-Dichloroethene	89	93	69-127	4	0-25	
Toluene	100	107	75-124	7	0-25	
Trichloroethene	95	100	60-137	6	0-25	
Vinyl Chloride	85	91	70-130	6	0-25	
Methyl-t-Butyl Ether (MTBE)	100	105	80-120	5	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-2,591	Aqueous	GC/MS T	N/A	06/12/01	061101BW

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	103	101	72-127	2	0-25	
Carbon Tetrachloride	95	96	70-130	1	0-25	
Chlorobenzene	107	102	72-131	5	0-25	
1,2-Dichlorobenzene	106	103	70-130	3	0-25	
1,1-Dichloroethene	92	94	69-127	3	0-25	
Toluene	109	106	75-124	3	0-25	
Trichloroethene	101	99	60-137	1	0-25	
Vinyl Chloride	94	95	79-118	1	0-25	
Methyl-t-Butyl Ether (MTBE)	105	101	80-120	4	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: HR0575-3

Date Received: 06/09/01
Work Order No: 01-06-0459
Preparation: N/A
Method: EPA 8260B

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-2,592	Aqueous	GC/MS T	N/A	06/11/01	061101AW

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	102	72-127	3	0-25	
Carbon Tetrachloride	92	98	70-130	6	0-25	
Chlorobenzene	102	105	72-131	3	0-25	
1,2-Dichlorobenzene	102	105	70-130	3	0-25	
1,1-Dichloroethene	91	96	69-127	6	0-25	
Toluene	104	109	75-124	5	0-25	
Trichloroethene	98	101	60-137	3	0-25	
Vinyl Chloride	90	97	79-118	7	0-25	
Methyl-t-Butyl Ether (MTBE)	96	99	80-120	3	0-25	

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8310

GeoSyntec Consultants
Page 1 of 1

Work Order No.: 01-06-0459
Date Analyzed: 06/12/01

LCS/LCS Duplicate

Analyte	LCS%REC	LCSD%REC	Control Limits	%RPD	Control Limits
Benzo (b) Fluoranthene	88	91	40 - 160	3	0 - 20
Benzo (k) Fluoranthene	90	92	40 - 160	2	0 - 20
Benzo (a) Pyrene	60	61	40 - 160	2	0 - 20
Indeno (1,2,3-c,d) Pyrene	74	79	40 - 160	5	0 - 20
Dibenzo (a,h) Anthracene	91	100	40 - 160	9	0 - 20
Benzo (g,h,i) Perylene	86	76	40 - 160	12	0 - 20

Surrogate Recoveries (in %)

Sample Number	S1
01-GW-001	64
01-GW-002	73
01-GW-003	68
02-GW-001	73
02-GW-002	78
Method Blank	62

Surrogate Compound	%REC Acceptable Limits
S1 > Decafluorobiphenyl	10 - 129

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 418.1

GeoSyntec Consultants
Page 1 of 1

Work Order No.: 01-06-0459
Date Analyzed: 06/12/01

LCS/LCS Duplicate

Analyte	LCS%REC	LCSD%REC	Control Limits	%RPD	Control Limits
Total Recoverable Petroleum Hydrocarbons	100	100	70 - 130	0	0 - 30

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 01-06-0459

Qualifier	Definition
D	The sample data was reported from a diluted analysis.
E	Concentration exceeds the calibration range.
ND	Not detected at indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the sample concentration exceeding the spike concentration by a factor of four or greater.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

CALSCIENCE CHANGE ORDER

ORDER: 01-06-0459, 01-06-0506, 01-06-0540
PROJECT: HR0575-03

CHANGE:

Add 8015 gas on all samples in the referenced work orders on a 24 hr TAT. Will be due 6/15/01.

REQUESTED BY:

Eric Smalstig - GeoSyntec
fax: 969-0820

Approved by Client: Ed [signature]
Date: 13 JUNE 01

Sign, date & fax back to 894-7501

FROM: S. Nowak **DATE:** 6/13/01 1800 hrs.

TOTAL P.01
TOTAL P.01

BORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date JUNE 9, 20__

Page 1 of 1

LABORATORY CLIENT: GeoSyntec Consultants		CLIENT PROJECT NAME / NUMBER: HR0558	P.O. NO.:
ADDRESS: 2100 Main Street Suite 150		PROJECT CONTACT: Eric Smalstig	LAB USE ONLY 06-0459
CITY Huntington Beach STATE CA ZIP ~~92841~~ 92648		SAMPLER(S): (SIGNATURE) Brian Hendron	COOLER RECEIPT TEMP = ____ °C
TEL: (714) 969-0800	FAX: (714) 969-0820 E-MAIL:		

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___.

SPECIAL INSTRUCTIONS SAMPLES PRESERVED WITH ICE UNTIL DELIVERED TO LAB.

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or ___	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	VOCs (5035 / 8260B) EnCore	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EOB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	TRPH	PAH	METALS	GEN MINERALS
1	01-GW-001	HR0558	JUNE 9	0900	H_2O	8					3		1									1	1	1	1
2	01-GW-002			1100		8					3		1									1	1	1	1
3	01-GW-003			1300		8					3		1									1	1	1	1
4	02-GW-001			1500		8					3		1									1	1	1	1
5	02-GW-003			1700		8					3		1									1	1	1	1

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature) Brian Hendron	Received for Laboratory by: (Signature)	Date: 6/9/01	Time: 18:25

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively

10/01/00 Revision

Calscience
Environmental
Laboratories, Inc.

June 22, 2001

Eric Smalstig
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Subject: **Calscience Work Order No.:** **01-06-0838**
Client Reference: **NBR HR0575-03**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/15/01 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

William H. Christensen
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Attn: Eric Smalstig
RE: NBR HR0575-03

Date Sampled: 06/15/01
Date Received: 06/15/01
Date Extracted: 06/19/01
Date Analyzed: 06/20/01
Work Order No.: 01-06-0838
Method: EPA 8015M
Page 1 of 1

All total petroleum hydrocarbon concentrations are reported in mg/kg (ppm) using Crude Oil as a standard.

Sample Number	Concentration	Reporting Limit
02-GW-002	960000	10000
Method Blank	ND	25

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: Ext. + D/I
Method: TPH - Carbon Range

Project: NBR HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-002	01-06-0838-1	06/15/01	Oil	06/19/01	06/20/01	01061904sa

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	320		1000	D	mg/kg	C21-C22	32000		1000	D	mg/kg
C8	1900		1000	D	mg/kg	C23-C24	31000		1000	D	mg/kg
C9-C10	18000		1000	D	mg/kg	C25-C28	59000		1000	D	mg/kg
C11-C12	44000		1000	D	mg/kg	C29-C32	61000		1000	D	mg/kg
C13-C14	50000		1000	D	mg/kg	C33-C36	41000		1000	D	mg/kg
C15-C16	43000		1000	D	mg/kg	C37-C40	27000		1000	D	mg/kg
C17-C18	42000		1000	D	mg/kg	C41-C44	10000		1000	D	mg/kg
C19-C20	42000		1000	D	mg/kg	C7-C44 Total	500000	5000	1000	D	mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	88	45-149	

Method Blank	098-03-002-1,121	N/A	Solid	06/19/01	06/19/01	01061904sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	100	45-149	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience
Environmental
Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/15/01
2100 Main Street, Suite 150	Date Received:	06/15/01
Huntington Beach, CA 92648	Date Extracted:	06/18/01
	Date Analyzed:	06/20/01
	Work Order No.:	01-06-0838
Attn: Eric Smalstig	Method:	EPA 8310
RE: NBR HR0575-03	Page 1 of 2	

All concentrations are reported in µg/kg (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: 02-GW-002		
Naphthalene	250000	10000
Acenaphthylene	69000	1000
Acenaphthene	130000	1000
Fluorene	13000	1000
Phenanthrene	67000	10000
Anthracene	10000	1000
Fluoranthene	52000	10000
Pyrene	100000	10000
Benzo (a) Anthracene	52000	10000
Chrysene	19000	1000
Benzo (b) Fluoranthene	8200	1000
Benzo (k) Fluoranthene	6500	1000
Benzo (a) Pyrene	12000	1000
Indeno (1,2,3-c,d) Pyrene	3300	1000
Dibenzo (a,h) Anthracene	36000	1000
Benzo (g,h,i) Perylene	50000	10000

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Attn: Eric Smalstig
RE: NBR HR0575-03

Date Sampled: NA
Date Received: NA
Date Extracted: 06/18/01
Date Analyzed: 06/19/01
Work Order No.: 01-06-0838
Method: EPA 8310

All concentrations are reported in µg/kg (ppb).

Analyte	Concentration	Reporting Limit
Sample Number: Method Blank		
Naphthalene	ND	1000
Acenaphthylene	ND	1000
Acenaphthene	ND	1000
Fluorene	ND	1000
Phenanthrene	ND	1000
Anthracene	ND	1000
Fluoranthene	ND	1000
Pyrene	ND	1000
Benzo (a) Anthracene	ND	1000
Chrysene	ND	1000
Benzo (b) Fluoranthene	ND	1000
Benzo (k) Fluoranthene	ND	1000
Benzo (a) Pyrene	ND	1000
Indeno (1,2,3-c,d) Pyrene	ND	1000
Dibenzo (a,h) Anthracene	ND	1000
Benzo (g,h,i) Perylene	ND	1000

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: N/A
Method: EPA 8260B

Project: NBR HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-002	01-06-0838-1	06/15/01	Oil	N/A	06/20/01	062001AE

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	130000	2500		ug/kg	1,3-Dichloropropane	ND	13000	2500		ug/kg
Benzene	32000	13000	2500		ug/kg	2,2-Dichloropropane	ND	13000	2500		ug/kg
Bromobenzene	ND	13000	2500		ug/kg	1,1-Dichloropropene	ND	13000	2500		ug/kg
Bromochloromethane	ND	13000	2500		ug/kg	c-1,3-Dichloropropene	ND	13000	2500		ug/kg
Bromodichloromethane	ND	13000	2500		ug/kg	t-1,3-Dichloropropene	ND	13000	2500		ug/kg
Bromoform	ND	13000	2500		ug/kg	Ethylbenzene	53000	13000	2500		ug/kg
Bromomethane	ND	13000	2500		ug/kg	2-Hexanone	ND	130000	2500		ug/kg
2-Butanone	ND	130000	2500		ug/kg	Isopropylbenzene	ND	13000	2500		ug/kg
n-Butylbenzene	ND	13000	2500		ug/kg	p-Isopropyltoluene	33000	13000	2500		ug/kg
sec-Butylbenzene	26000	13000	2500		ug/kg	Methylene Chloride	ND	130000	2500		ug/kg
tert-Butylbenzene	ND	13000	2500		ug/kg	4-Methyl-2-Pentanone	ND	130000	2500		ug/kg
ırbon Disulfide	ND	130000	2500		ug/kg	Naphthalene	350000	130000	2500		ug/kg
ırbon Tetrachloride	ND	13000	2500		ug/kg	n-Propylbenzene	29000	13000	2500		ug/kg
Chlorobenzene	ND	13000	2500		ug/kg	Styrene	ND	13000	2500		ug/kg
Chloroethane	ND	13000	2500		ug/kg	1,1,1,2-Tetrachloroethane	ND	13000	2500		ug/kg
Chloroform	ND	13000	2500		ug/kg	1,1,2,2-Tetrachloroethane	ND	13000	2500		ug/kg
Chloromethane	ND	13000	2500		ug/kg	Tetrachloroethene	ND	13000	2500		ug/kg
2-Chlorotoluene	ND	13000	2500		ug/kg	Toluene	ND	13000	2500		ug/kg
4-Chlorotoluene	ND	13000	2500		ug/kg	1,2,3-Trichlorobenzene	ND	25000	2500		ug/kg
Dibromochloromethane	ND	13000	2500		ug/kg	1,2,4-Trichlorobenzene	ND	13000	2500		ug/kg
1,2-Dibromo-3-Chloropropane	ND	25000	2500		ug/kg	1,1,1-Trichloroethane	ND	13000	2500		ug/kg
1,2-Dibromoethane	ND	13000	2500		ug/kg	1,1,2-Trichloroethane	ND	13000	2500		ug/kg
Dibromomethane	ND	13000	2500		ug/kg	Trichloroethene	ND	13000	2500		ug/kg
1,2-Dichlorobenzene	ND	13000	2500		ug/kg	Trichlorofluoromethane	ND	130000	2500		ug/kg
1,3-Dichlorobenzene	ND	13000	2500		ug/kg	1,2,3-Trichloropropane	ND	13000	2500		ug/kg
1,4-Dichlorobenzene	ND	13000	2500		ug/kg	1,2,4-Trimethylbenzene	190000	13000	2500		ug/kg
Dichlorodifluoromethane	ND	13000	2500		ug/kg	1,3,5-Trimethylbenzene	53000	13000	2500		ug/kg
1,1-Dichloroethane	ND	13000	2500		ug/kg	Vinyl Acetate	ND	130000	2500		ug/kg
1,2-Dichloroethane	ND	13000	2500		ug/kg	Vinyl Chloride	ND	13000	2500		ug/kg
1,1-Dichloroethene	ND	13000	2500		ug/kg	p/m-Xylene	110000	13000	2500		ug/kg
c-1,2-Dichloroethene	ND	13000	2500		ug/kg	o-Xylene	86000	13000	2500		ug/kg
t-1,2-Dichloroethene	ND	13000	2500		ug/kg	Methyl-t-Butyl Ether (MTBE)	ND	13000	2500		ug/kg
1,2-Dichloropropane	ND	13000	2500		ug/kg						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	104	80-120		Toluene-d8	105	81-117	
1,4-Bromofluorobenzene	90	74-121					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: N/A
Method: EPA 8260B

Project: NBR HR0575-03

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**099-10-005-1,609**	**N/A**	**Solid**	**N/A**	**06/20/01**	**062001AE**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	500	10		ug/kg	1,3-Dichloropropane	ND	50	10		ug/kg
Benzene	ND	50	10		ug/kg	2,2-Dichloropropane	ND	50	10		ug/kg
Bromobenzene	ND	50	10		ug/kg	1,1-Dichloropropene	ND	50	10		ug/kg
Bromochloromethane	ND	50	10		ug/kg	c-1,3-Dichloropropene	ND	50	10		ug/kg
Bromodichloromethane	ND	50	10		ug/kg	t-1,3-Dichloropropene	ND	50	10		ug/kg
Bromoform	ND	50	10		ug/kg	Ethylbenzene	ND	50	10		ug/kg
Bromomethane	ND	50	10		ug/kg	2-Hexanone	ND	500	10		ug/kg
2-Butanone	ND	500	10		ug/kg	Isopropylbenzene	ND	50	10		ug/kg
n-Butylbenzene	ND	50	10		ug/kg	p-Isopropyltoluene	ND	50	10		ug/kg
sec-Butylbenzene	ND	50	10		ug/kg	Methylene Chloride	ND	500	10		ug/kg
tert-Butylbenzene	ND	50	10		ug/kg	4-Methyl-2-Pentanone	ND	500	10		ug/kg
Carbon Disulfide	ND	500	10		ug/kg	Naphthalene	ND	500	10		ug/kg
Carbon Tetrachloride	ND	50	10		ug/kg	n-Propylbenzene	ND	50	10		ug/kg
Chlorobenzene	ND	50	10		ug/kg	Styrene	ND	50	10		ug/kg
Chloroethane	ND	50	10		ug/kg	1,1,1,2-Tetrachloroethane	ND	50	10		ug/kg
Chloroform	ND	50	10		ug/kg	1,1,2,2-Tetrachloroethane	ND	50	10		ug/kg
Chloromethane	ND	50	10		ug/kg	Tetrachloroethene	ND	50	10		ug/kg
2-Chlorotoluene	ND	50	10		ug/kg	Toluene	ND	50	10		ug/kg
4-Chlorotoluene	ND	50	10		ug/kg	1,2,3-Trichlorobenzene	ND	100	10		ug/kg
Dibromochloromethane	ND	50	10		ug/kg	1,2,4-Trichlorobenzene	ND	50	10		ug/kg
1,2-Dibromo-3-Chloropropane	ND	100	10		ug/kg	1,1,1-Trichloroethane	ND	50	10		ug/kg
1,2-Dibromoethane	ND	50	10		ug/kg	1,1,2-Trichloroethane	ND	50	10		ug/kg
Dibromomethane	ND	50	10		ug/kg	Trichloroethene	ND	50	10		ug/kg
1,2-Dichlorobenzene	ND	50	10		ug/kg	Trichlorofluoromethane	ND	500	10		ug/kg
1,3-Dichlorobenzene	ND	50	10		ug/kg	1,2,3-Trichloropropane	ND	50	10		ug/kg
1,4-Dichlorobenzene	ND	50	10		ug/kg	1,2,4-Trimethylbenzene	ND	50	10		ug/kg
Dichlorodifluoromethane	ND	50	10		ug/kg	1,3,5-Trimethylbenzene	ND	50	10		ug/kg
1,1-Dichloroethane	ND	50	10		ug/kg	Vinyl Acetate	ND	500	10		ug/kg
1,2-Dichloroethane	ND	50	10		ug/kg	Vinyl Chloride	ND	50	10		ug/kg
1,1-Dichloroethene	ND	50	10		ug/kg	p/m-Xylene	ND	50	10		ug/kg
c-1,2-Dichloroethene	ND	50	10		ug/kg	o-Xylene	ND	50	10		ug/kg
t-1,2-Dichloroethene	ND	50	10		ug/kg	Methyl-t-Butyl Ether (MTBE)	ND	50	10		ug/kg
1,2-Dichloropropane	ND	50	10		ug/kg						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	112	80-120		Toluene-d8	96	81-117	
1,4-Bromofluorobenzene	89	74-121					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: NBR HR0575-03

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: Ext. + D/I
Method: TPH - Carbon Range

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0863-9	Solid	GC 15	06/19/01	06/19/01	01061904ms

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	97	88	49-139	10	0-28	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: NBR HR0575-03

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: Ext. + D/I
Method: TPH - Carbon Range

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-002-1,121	Solid	GC 15	06/19/01	06/19/01	01061904sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	97	97	65-124	1	0-13	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: NBR HR0575-03

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: N/A
Method: EPA 8260B

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-0863-2	Solid	GC/MS S	N/A	06/20/01	0106086302

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	93	98	72-127	5	0-25	
Carbon Tetrachloride	89	94	70-130	6	0-25	
Chlorobenzene	89	95	72-131	6	0-25	
1,2-Dichlorobenzene	86	90	70-130	5	0-25	
1,1-Dichloroethene	91	98	69-127	8	0-25	
Toluene	95	101	75-124	6	0-25	
Trichloroethene	91	95	60-137	5	0-25	
Vinyl Chloride	93	102	70-130	9	0-25	
Methyl-t-Butyl Ether (MTBE)	97	102	80-120	5	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: NBR HR0575-03

Date Received: 06/15/01
Work Order No: 01-06-0838
Preparation: N/A
Method: EPA 8260B

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-005-1,609	Solid	GC/MS S	N/A	06/20/01	062001AE

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	98	72-127	3	0-25	
Carbon Tetrachloride	95	90	70-130	6	0-25	
Chlorobenzene	96	98	72-131	2	0-25	
1,2-Dichlorobenzene	98	97	70-130	1	0-25	
1,1-Dichloroethene	98	94	69-127	5	0-25	
Toluene	101	102	75-124	2	0-25	
Trichloroethene	100	95	60-137	5	0-25	
Vinyl Chloride	101	101	79-118	0	0-25	
Methyl-t-Butyl Ether (MTBE)	99	95	80-120	4	0-25	

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8015M - Crude Oil

GeoSyntec Consultants
Page 1 of 1

Work Order No.: 01-06-0838
Date Analyzed: 06/20/01

LCS/LCS Duplicate

Analyte	LCS%REC	LCSD%REC	Control Limits	%RPD	Control Limits
TPH- Crude Oil	91	90	65 - 124	0	0 - 13

Surrogate Recoveries (in %)

Sample Number	S1
02-GW-002	94
Method Blank	70

Surrogate Compound	%REC Acceptable Limits
S1 > Decachlorobiphenyl	45 - 149

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8310

GeoSyntec Consultants | Work Order No.: 01-06-0838
Page 1 of 1 | Date Analyzed: 06/20/01

LCS/LCS Duplicate

Analyte	LCS%REC	LCSD%REC	Control Limits	%RPD	Control Limits
Benzo (b) Fluoranthene	97	95	40 - 160	2	0 - 20
Benzo (k) Fluoranthene	92	92	40 - 160	0	0 - 20
Benzo (a) Pyrene	112	106	40 - 160	6	0 - 20
Indeno (1,2,3-c,d) Pyrene	90	91	40 - 160	1	0 - 20
Dibenzo (a,h) Anthracene	104	111	40 - 160	1	0 - 20
Benzo (g,h,i) Perylene	104	110	40 - 160	6	0 - 20

Surrogate Recoveries (in %)

Sample Number	S1
02-GW-002	807[Note 1]
Method Blank	117

Surrogate Compound	%REC Acceptable Limits
S1 > Decafluorobiphenyl	22 - 153

1. The surrogate recovery was out of control due to a matrix interference effect. The batch method blank surrogate was in control and, hence, the associated sample data was reported with no further corrective action required.

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 01-06-0838

Qualifier	Definition
D	The sample data was reported from a diluted analysis.
ND	Not detected at indicated reporting limit.

BORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date 6/15/01

Page 1 of 1

LABORATORY CLIENT: GEOSYNTEC CONSULTANTS
ADDRESS: 2100 MAIN ST, #150
CITY: HUNTINGTON BEACH STATE: CA ZIP: 92648
TEL: (714) 969-0800 FAX: (714) 969-0820 E-MAIL:

CLIENT PROJECT NAME / NUMBER: NBI HR0575-03
PROJECT CONTACT: ERIC SMALSTIG
SAMPLER(S): (SIGNATURE) Brian Henchon

P.O. NO.:
LAB USE ONLY: 06-0812

COOLER RECEIPT
TEMP = ____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___

SPECIAL INSTRUCTIONS
SAMPLE PRESERVED W/ ICE TO 3°C

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or ____	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	VOCs (5035 / 8260B) EnCore	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EDB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	PETROLEUM HYDROCARBON BY CA/DE DHS STANDARD	TPH (C7-C44)	PAH 8310	VOCs 8260
	OZ-GW-002	TANK FARM	6/15	10AM	OIL	1																X	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date: 06/15/01	Time: 1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date: 06/15/01	Time: 1645

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

10/01/00 Revision

Q&Q Graphic (714) 898-9702

Calscience Environmental Laboratories, Inc.

June 27, 2001

Eric Smalstig
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Subject: **Calscience Work Order No.:** **01-06-1322**
Client Reference: **Newport Oil / HR0575**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/26/01 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental Laboratories, Inc.
Stephen Nowak
Project Manager

William H. Christensen
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: Ext. + D/I
Method: EPA 8015M

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-001	01-06-1322-1	Aqueous	06/26/01	06/26/01	06/27/01	01062601sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	96	53-141	

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-1322-2	Aqueous	06/26/01	06/26/01	06/27/01	01062601sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	83	53-141	

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-002	01-06-1322-3	Aqueous	06/26/01	06/26/01	06/27/01	01062601sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	90	53-141	

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	098-03-003-666	Aqueous	N/A	06/26/01	06/26/01	01062601sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	96	53-141	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: EPA 5030B
Method: EPA 8015M

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-001	01-06-1322-1	Aqueous	06/26/01	N/A	06/27/01	01062701sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	87	49-157	

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-1322-2	Aqueous	06/26/01	N/A	06/27/01	01062701sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	86	49-157	

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-002	01-06-1322-3	Aqueous	06/26/01	N/A	06/27/01	01062701sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	64	49-157	

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	098-03-006-1,519	Aqueous	N/A	N/A	06/26/01	01062701sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	85	49-157	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/26/01
2100 Main Street, Suite 150	Date Received:	06/26/01
Huntington Beach, CA 92648	Date Extracted:	06/26/01
	Date Analyzed:	06/26-27/01
	Work Order No.:	01-06-1322
Attn: Eric Smalstig	Method:	EPA 8015M
RE: Newport Oil / HR0575	Page 1 of 1	

All total petroleum hydrocarbon concentrations are reported in µg/L (ppb) using crude oil as a standard.

Sample Number	Concentration	Reporting Limit
02-GW-001	ND	5000
01-GW-001	ND	5000
01-GW-002	ND	5000
Method Blank	ND	5000

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-001	01-06-1322-1	06/26/01	Aqueous	N/A	06/27/01	062601BW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
arbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
arbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	4.8	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	109	86-118		Toluene-d8	98	88-110	
1,4-Bromofluorobenzene	95	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-001	01-06-1322-2	06/26/01	Aqueous	N/A	06/27/01	062601BW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
ırbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
ırbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	3.8	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	0.51	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	1.2	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	111	86-118		Toluene-d8	100	88-110	
1,4-Bromofluorobenzene	99	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
01-GW-002	01-06-1322-3	06/26/01	Aqueous	N/A	06/27/01	062601BW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
ırbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
ırbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	3.6	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	15	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	3.6	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	110	86-118		Toluene-d8	100	88-110	
1,4-Bromofluorobenzene	97	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**099-10-006-2,750**	**N/A**	**Aqueous**	**N/A**	**06/27/01**	**062601BW**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
Carbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
rbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
hlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	108	86-118		Toluene-d8	101	88-110	
1,4-Bromofluorobenzene	95	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: EPA 5030B
Method: EPA 8015M

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-1274-4	Aqueous	GC 1	N/A	06/27/01	01062701ms

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	118	107	72-120	9	0-21	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: EPA 5030B
Method: EPA 8015M

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-006-1,519	Aqueous	GC 1	N/A	06/26/01	01062701sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	104	106	81-123	2	0-17	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: N/A
Method: EPA 8260B

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-1242-8	Aqueous	GC/MS T	N/A	06/27/01	01061242-8

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	106	72-127	2	0-25	
Carbon Tetrachloride	104	104	70-130	0	0-25	
Chlorobenzene	96	98	72-131	2	0-25	
1,2-Dichlorobenzene	99	103	70-130	4	0-25	
1,1-Dichloroethene	113	112	69-127	1	0-25	
Toluene	102	104	75-124	2	0-25	
Trichloroethene	102	103	60-137	2	0-25	
Vinyl Chloride	108	111	70-130	3	0-25	
Methyl-t-Butyl Ether (MTBE)	116	119	80-120	3	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: N/A
Method: EPA 8260B

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-2,750	Aqueous	GC/MS T	N/A	06/27/01	062601BW

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	103	72-127	2	0-25	
Carbon Tetrachloride	104	106	70-130	2	0-25	
Chlorobenzene	97	96	72-131	1	0-25	
1,2-Dichlorobenzene	100	101	70-130	1	0-25	
1,1-Dichloroethene	96	112	69-127	15	0-25	
Toluene	103	100	75-124	3	0-25	
Trichloroethene	103	103	60-137	0	0-25	
Vinyl Chloride	110	112	79-118	2	0-25	
Methyl-t-Butyl Ether (MTBE)	110	111	80-120	0	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/26/01
Work Order No: 01-06-1322
Preparation: Ext. + D/I
Method: EPA 8015M

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-003-666	Aqueous	GC 6	06/26/01	06/26/01	01062601sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	84	84	67-128	0	0-21	

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8015M - Crude Oil

GeoSyntec Consultants — Work Order No.: 01-06-1322
Page 1 of 1 — Date Analyzed: 6/27/01

Laboratory Control Sample

Analyte	Conc. Added	Conc. Rec.	%REC	Control Limits
TPH- Crude Oil	40000	33500	84	67 - 128

Surrogate Recoveries (in %)

Sample Number	S1
02-GW-001	96
01-GW-001	83
01-GW-002	90
Method Blank	96

Surrogate Compound	%REC Acceptable Limits
S1 > Decachlorobiphenyl	53 - 141

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 01-06-1322

Qualifier	Definition
ND	Not detected at indicated reporting limit.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

ORATORIES, INC.

7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date June 26, 2a

Page 1 of 1

LABORATORY CLIENT: GeoSyntec Consultants

ADDRESS: 2100 Main Street Suite 150

CITY Huntington Beach STATE CA ZIP 92648

TEL: (714) 969-0800 FAX: (714) 969-0800 E-MAIL:

CLIENT PROJECT NAME / NUMBER: Newport Oil HR0575

PROJECT CONTACT: Eric Smalstig

SAMPLER(S): (SIGNATURE) Brian Hendron / Brian Hendron

P.O. NO.: HR0575

LAB USE ONLY 06-1322

COOLER RECEIPT TEMP = 5 °C

TURNAROUND TIME
☐ SAME DAY ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___

SPECIAL INSTRUCTIONS Preserved samples w/ Ice to 3°C in field

Confirm analysis w/ Steve Nowack

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or ___	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	VOCs (5035 / 8260B) EnCore	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EOB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	Crude Oil Standard	Diesel	
	02-GW-001	02	6/26	1345	Water	8	3				3											1	1	X
	01-GW-001	01	↓	1520	↓	↓	3				3											1	1	
	01-GW-002	01		1645			3				3											1	1	
										NO PRESERVE ADDED														
	Temp Blank																							

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date: 6/26/01	Time: 1750

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

10/01/00 Revision

Calscience Environmental Laboratories, Inc.

June 28, 2001

Eric Smalstig
GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Subject: **Calscience Work Order No.:** **01-06-1371**
Client Reference: **Newport Oil / HR0575**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/27/01 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

Calscience Environmental Laboratories, Inc.
Stephen Nowak
Project Manager

William H. Christensen
Quality Assurance Manager

Calscience
Environmental
Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants	Date Sampled:	06/27/01
2100 Main Street, Suite 150	Date Received:	06/27/01
Huntington Beach, CA 92648	Date Extracted:	06/27/01
	Date Analyzed:	06/27/01
	Work Order No.:	01-06-1371
Attn: Eric Smalstig	Method:	EPA 8015M
RE: Newport Oil / HR0575	Page 1 of 1	

All total petroleum hydrocarbon concentrations are reported in µg/L (ppb) using crude oil as a standard.

Sample Number	Concentration	Reporting Limit
02-GW-003	26000	5000
Method Blank	ND	5000

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: Ext. + D/I
Method: EPA 8015M

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-1371-1	Aqueous	06/27/01	06/27/01	06/27/01	01062601sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	2200	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	79	53-141	

Method Blank	098-03-003-666	Aqueous	N/A	06/26/01	06/26/01	01062601sa

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	96	53-141	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: EPA 5030B
Method: EPA 8015M

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Matrix:	Date Collected:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-1371-1	Aqueous	06/27/01	N/A	06/28/01	01062701sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	89	49-157	

Method Blank	098-03-006-1,521	Aqueous	N/A	N/A	06/27/01	01062701sa

Parameter	Result	RL	DF	Qual	Units
TPH for Gasoline	ND	100	1		ug/L

urrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	100	49-157	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
02-GW-003	01-06-1371-1	06/27/01	Aqueous	N/A	06/27/01	062701AW

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
[illegible]Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
[illegible]n Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
[illegible]on Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	1.1	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	95	86-118		Toluene-d8	109	88-110	
1,4-Bromofluorobenzene	106	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	**099-10-006-2,757**	**N/A**	**Aqueous**	**N/A**	**06/27/01**	**062701AW**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Acetone	ND	10	1		ug/L	1,3-Dichloropropane	ND	1.0	1		ug/L
Benzene	ND	0.50	1		ug/L	2,2-Dichloropropane	ND	1.0	1		ug/L
Bromobenzene	ND	1.0	1		ug/L	1,1-Dichloropropene	ND	1.0	1		ug/L
Bromochloromethane	ND	1.0	1		ug/L	c-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromodichloromethane	ND	1.0	1		ug/L	t-1,3-Dichloropropene	ND	0.50	1		ug/L
Bromoform	ND	1.0	1		ug/L	Ethylbenzene	ND	1.0	1		ug/L
Bromomethane	ND	1.0	1		ug/L	2-Hexanone	ND	10	1		ug/L
2-Butanone	ND	10	1		ug/L	Isopropylbenzene	ND	1.0	1		ug/L
n-Butylbenzene	ND	1.0	1		ug/L	p-Isopropyltoluene	ND	1.0	1		ug/L
sec-Butylbenzene	ND	1.0	1		ug/L	Methylene Chloride	ND	10	1		ug/L
tert-Butylbenzene	ND	1.0	1		ug/L	4-Methyl-2-Pentanone	ND	10	1		ug/L
Carbon Disulfide	ND	10	1		ug/L	Naphthalene	ND	10	1		ug/L
Carbon Tetrachloride	ND	0.50	1		ug/L	n-Propylbenzene	ND	1.0	1		ug/L
Chlorobenzene	ND	1.0	1		ug/L	Styrene	ND	1.0	1		ug/L
Chloroethane	ND	1.0	1		ug/L	1,1,1,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloroform	ND	1.0	1		ug/L	1,1,2,2-Tetrachloroethane	ND	1.0	1		ug/L
Chloromethane	ND	1.0	1		ug/L	Tetrachloroethene	ND	1.0	1		ug/L
2-Chlorotoluene	ND	1.0	1		ug/L	Toluene	ND	1.0	1		ug/L
4-Chlorotoluene	ND	1.0	1		ug/L	1,2,3-Trichlorobenzene	ND	1.0	1		ug/L
Dibromochloromethane	ND	1.0	1		ug/L	1,2,4-Trichlorobenzene	ND	1.0	1		ug/L
1,2-Dibromo-3-Chloropropane	ND	5.0	1		ug/L	1,1,1-Trichloroethane	ND	1.0	1		ug/L
1,2-Dibromoethane	ND	1.0	1		ug/L	1,1,2-Trichloroethane	ND	1.0	1		ug/L
Dibromomethane	ND	1.0	1		ug/L	Trichloroethene	ND	1.0	1		ug/L
1,2-Dichlorobenzene	ND	1.0	1		ug/L	Trichlorofluoromethane	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	1.0	1		ug/L	1,2,3-Trichloropropane	ND	5.0	1		ug/L
1,4-Dichlorobenzene	ND	1.0	1		ug/L	1,2,4-Trimethylbenzene	ND	1.0	1		ug/L
Dichlorodifluoromethane	ND	1.0	1		ug/L	1,3,5-Trimethylbenzene	ND	1.0	1		ug/L
1,1-Dichloroethane	ND	1.0	1		ug/L	Vinyl Acetate	ND	10	1		ug/L
1,2-Dichloroethane	ND	0.50	1		ug/L	Vinyl Chloride	ND	0.50	1		ug/L
1,1-Dichloroethene	ND	1.0	1		ug/L	p/m-Xylene	ND	1.0	1		ug/L
c-1,2-Dichloroethene	ND	1.0	1		ug/L	o-Xylene	ND	1.0	1		ug/L
t-1,2-Dichloroethene	ND	1.0	1		ug/L	Methyl-t-Butyl Ether (MTBE)	ND	1.0	1		ug/L
1,2-Dichloropropane	ND	1.0	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	96	86-118		Toluene-d8	110	88-110	
1,4-Bromofluorobenzene	106	86-115					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: EPA 5030B
Method: EPA 8015M

Project: Newport Oil / HR0575

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-06-1244-2	Aqueous	GC 24	N/A	06/27/01	0106270 1ms

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	110	109	72-120	1	0-21	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: EPA 5030B
Method: EPA 8015M

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-006-1,521	Aqueous	GC 24	N/A	06/27/01	01062701sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH for Gasoline	109	107	81-123	2	0-17	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: N/A
Method: EPA 8260B

Project: Newport Oil / HR0575

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-GW-003	Aqueous	GC/MS R	N/A	06/28/01	0106137101

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	98	72-127	1	0-25	
Carbon Tetrachloride	115	119	70-130	3	0-25	
Chlorobenzene	100	98	72-131	1	0-25	
1,2-Dichlorobenzene	101	101	70-130	1	0-25	
1,1-Dichloroethene	108	112	69-127	4	0-25	
Toluene	104	100	75-124	4	0-25	
Trichloroethene	107	103	60-137	4	0-25	
Vinyl Chloride	111	108	70-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	107	106	80-120	1	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: N/A
Method: EPA 8260B

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-2,757	Aqueous	GC/MS R	N/A	06/27/01	062701AW

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	100	72-127	0	0-25	
Carbon Tetrachloride	116	121	70-130	3	0-25	
Chlorobenzene	101	101	72-131	1	0-25	
1,2-Dichlorobenzene	103	100	70-130	3	0-25	
1,1-Dichloroethene	101	103	69-127	2	0-25	
Toluene	107	105	75-124	2	0-25	
Trichloroethene	109	108	60-137	1	0-25	
Vinyl Chloride	103	100	79-118	3	0-25	
Methyl-t-Butyl Ether (MTBE)	94	103	80-120	9	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSyntec Consultants
2100 Main Street, Suite 150
Huntington Beach, CA 92648

Project: Newport Oil / HR0575

Date Received: 06/27/01
Work Order No: 01-06-1371
Preparation: Ext. + D/I
Method: EPA 8015M

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-003-666	Aqueous	GC 6	06/26/01	06/26/01	01062601sa

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	84	84	67-128	0	0-21	

Calscience Environmental Laboratories, Inc.

QUALITY ASSURANCE SUMMARY

Method EPA 8015M - Crude Oil

GeoSyntec Consultants
Page 1 of 1

Work Order No.: 01-06-1371
Date Analyzed: 6/27/01

Laboratory Control Sample

Analyte	Conc. Added	Conc. Rec.	%REC	Control Limits
TPH- Crude Oil	40000	33500	84	67 - 128

Surrogate Recoveries (in %)

Sample Number	S1
02-GW-003	78
Method Blank	96

Surrogate Compound	%REC Acceptable Limits
S1 > Decachlorobiphenyl	53 - 141

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 01-06-1371

Qualifier	Definition
ND	Not detected at indicated reporting limit.

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501

CALSCIENCE ENVIRONMENTAL LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date June 27, 1

Page 1 of 1

LABORATORY CLIENT: GeoSyntec Consultants

ADDRESS: 2100 Main Street 150

CITY: Huntington Beach STATE: CA ZIP: 92648

TEL: (714) 969-0800 FAX: (714) 969-0820 E-MAIL:

CLIENT PROJECT NAME / NUMBER: Newport Oil HR0575

PROJECT CONTACT: Eric Smalstig

SAMPLER(S): (SIGNATURE) Brian Hendron

P.O. NO.: HR0575

LAB USE ONLY: 06-137

COOLER RECEIPT TEMP = °C

TURNAROUND TIME
☐ SAME DAY ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___ / ___ / ___

SPECIAL INSTRUCTIONS: SAMPLES PRESERVED W/ ICE IN FIELD.

NO PRESERVE IN SAMPLE BOTTLES

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or	BTEX / MTBE (8021B)	HALOCARBONS (8021B)	VOCs (8260B)	VOCs (5035 / 8260B) EnCore	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	EDB / DBCP (504.1) or (8011)	CAC, T22 METALS (6010B)	PNAs (8310)	VOCs (TO-14A) or (TO-15)	CH_4 / TGNMO (25.1)	FIXED GASES (25.1) or (D1946)	Crude Oil Standard	Diesel
	02-GW-003	02	6/27	1430	W	8	3				3											1	1

Relinquished by: (Signature) Brian Hendron — Received by: (Signature) — Date: 6/27/01 — Time: 1600

Relinquished by: (Signature) — Received by: (Signature) — Date: — Time:

Relinquished by: (Signature) — Received for Laboratory by: (Signature) — Date: — Time:

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

/00 Revision

Q&Q Graphic (714) 898-9702