THRIFTY OIL CO.

2410

July 15, 2015

O-15 2239

Ms. Adrianna M. Crowl
State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100
Sacramento, California 95812-0100

Certified Mail
7011 3500 0003 5855 4850

Re: Former Thrifty Oil Co. Station #213
29145 Heathercliff Road
Malibu, California 90265

LARWQCB Case No. I-00626B
Global ID. T10000004593

Subject: Petition to the State Water Resources Control Board Regarding Designating Thrifty Oil Co. as Responsible Party to Perform Site Characterization

Dear Ms. Crowl,

Thrifty Oil Co. (Thrifty) is submitting this petition to be reviewed by the California State Water Resources Control Board (SWRCB), regarding the designation by the Los Angeles Regional Water Quality Control Board (LARWQCB) of Thrifty as a responsible party (RP) to perform site characterization at the former Thrifty Service Station #213 located at 29145 Heathercliff Road in Malibu, California.

In their June 24, 2015 letter to Thrifty, the LARWQCB named Thrifty, Chevron Environmental Management Company (Chevron), and Atlantic Richfield Company (ARCO) as RPs to perform site characterization at the above-referenced property, and are requiring submittal of a Groundwater Monitoring Well Installation Work Plan (Work Plan) by August 15, 2015 (**Attachment A**). We believe that the decision to name Thrifty as one of the three RPs is an unfair and arbitrary decision, for the reasons presented below:

Chevron was named primary RP by the LARWQCB in April 1987 following the reported release of 2,600 gallons of gasoline in February 1986 (Case I-00626); Chevron had operated the facility since the mid 1970s. Chevron remained RP until closure was granted by the LARWQCB in September 1996.

Chevron was again named primary RP in October 2003 (Case I-00626A), following the discovery of soil contamination during ARCO's dispenser and piping upgrade activities in September 2003, after ARCO had operated the facility for six years. Chevron remained RP until closure was granted in July 2009. No remediation activities were conducted by Chevron before closure.

In twice naming Chevron as RP, the LARWQCB was obviously well aware that Chevron was responsible for the contamination in both instances. Any releases after year 1997 (when Thrifty last operated the facility) cannot be Thrifty's responsibility, and would have to be attributable to either a new release by ARCO and/or verified pre-existing contamination from Chevron. No other unauthorized releases have been documented which would implicate Thrifty as a third RP. Additional evidence is presented below which serve to demonstrate that Thrifty should not be named as an additional RP, or if that is not possible, to be named as Secondary RP instead of one of the three RPs.

This appeal follows the format published in the SWRCB's Instructions for Filing Water Quality Petitions (Updated June 1, 2015).

1. Name, address, telephone number, and e-mail address of the petitioner:

   Thrifty Oil Co.
   Attn: Mr. Barry Berkett
   13116 Imperial Hwy.
   Santa Fe Springs, CA 90670

   Phone Number: (562) 921-3581
   E-Mail Address: berkett@thriftyoil.com

2. The action or inaction of the Regional Water Board being petitioned, including a copy of the action being challenged or any refusal to act, if available:

   In their June 24, 2015 letter to Thrifty, the LARWQCB designated Thrifty, along with Chevron and ARCO as RPs to perform site characterization at the above-referenced property, and are requiring submittal of a Groundwater Monitoring Well Installation Work Plan (Work Plan) by August 15, 2015 (**Attachment A**).

3. The date the Regional Water Board acted, or refused to act, or was requested to act:

   As described in bullet no. 2 above, the LARWQCB directives were issued in their letter dated June 24, 2015.

4. A statement of the reasons the action or inaction was inappropriate or improper:

   In their June 24, 2015 letter, the LARWQCB makes the following statement to justify naming Thrifty as a RP at the site: *Thrifty installed a diesel UST on the property in 1991 after purchasing the Site from Chevron in 1990. Thrifty and ARCO stored and dispensed diesel fuel during their operations and TPHd was detected in soil and groundwater. Those releases formed a commingled plume. As the owner of the referenced property, Thrifty also bears responsibility to comply with Regional Board requirements. Until a determination is made, all addressees listed above must jointly comply with Regional Board requirements and will be referred to as the responsible parties (RPs).* In response to this statement, Thrifty presents the following rebuttal:

   - Any detected total petroleum hydrocarbons as diesel (TPHd) in soil that

would be a result of Thrifty's operation at the site (from 1990 to 1997) would be included in the results of the baselining assessment activities at the site by ARCO in June and July 1997, conducted at the inception of the lease to ARCO. The results of this investigation are included in a *Baselining Subsurface Investigation Report* (Baselining Report) dated December 22, 1997 **(Attachment B)**. No TPHd was detected in soil samples collected from boring TDD-6, drilled immediately adjacent to the diesel UST, which would indicate that the diesel tank did not have a release during Thrifty's operation at the site. As cited in the June 24, 2015 LARWQCB letter, the maximum TPHd concentration in soil was 81 milligrams per kilogram (mg/kg), detected in boring TDD-2. Low concentratrations of TPHd were also detected in borings TDD-1 (5.7 mg/kg) and TDD-3 (up to 46 mg/kg). However, borings TDD-1, TDD-2, and TDD-3 were all located in the eastern and southern portions of the dispenser area, which is distant from the diesel dispensers located in the western dispenser area. Furthermore, a review of the laboratory analytical results included in the Baselining Report indicate that the hydrocarbon chain type specified in the TPHd analysis was C8-C32, which would include portions of total petroleum hydrocarbons as gasoline (TPHg), which typically have a hydrocarbon chain of C6-C12. As the typical effect of weathering of gasoline, the lighter/lesser carbon chain disappears, causing more of the gasoline components to be in the C8-C12 range where the TPHd analysis range starts. Therefore, the reported TPHd detections may very likely be TPHg, given the overlap in the hydrocarbon chain, and the significant distance from the soil borings to the diesel dispensers.

- Even if the alleged TPHd detections in 1997 were assumed to be of diesel, the maximum concentration of TPHd (81 mg/kg) in the 1997 assessment is far below the soil screening levels for TPHd (1,000 mg/kg; for groundwater depth ranging from 20 to 150 feet below grade) specified in Table 4.1 of the LARWQCB's Interim Site Assessment and Cleanup Guidebook dated May 1996. The TPHd was therefore not present at actionable levels, using the screening criteria available at the time of that assessment.

- Groundwater samples were not analyzed for TPHd in the 1997 baselining assessment, nor in assessment activities in conducted years1993 and 1996, as summarized in Table 2 of the June 24, 2015 LARWQCB letter. Therefore, there is no evidence linking TPHd in groundwater during Thrifty's operations at the site from 1990 to 1996. The only reported detections of TPHd in groundwater presented in Table 2 were in 1998 (0.85 micrograms per liter (ug/l)) and 2012 (770 ug/l), which represent a significant increase in diesel concentrations during ARCO's operations from 1997 through 2012.

- Therefore, notwithstanding the facts that Thrifty installed a diesel tank in 1991, and stored diesel during its short period of operation, Thrifty did not contribute to the release of diesel.

- Lastly, Thrifty believes it is unfair that it is being required to comply with

Regional Board requirements by merely being the owner of the property, with no apparent connection to the documented releases at the site.

The hydrocarbon releases at the site are well documented in the attached June 24, 2015 LARWQCB letter, and resulted in the LARWQCB twice naming Chevron as RP at the site, as follows:

- In February 1986 during Chevron's operation of the site, International Technology, Corporation (IT) submitted a leak incident report that reported approximately 2,600 gallons of unleaded gasoline were lost from piping located between the two dispenser islands over an unknown period of time that ended in October 1985. In subsequent site assessment activities conducted by IT in years 1986 and 1987, maximum hydrocarbon concentrations in soil samples were 2,200 mg/kg TPHg, 110 mg/kg benzene, 350 mg/kg toluene, 430 mg/kg ethylbenzene, and 2,100 mg/kg total xylenes. In April 1987, the LARWQCB opened case number I-00626 for the site and named Chevron as the RP. Chevron remained RP at the site for over 9 years before the site was closed in September 1996 by the LARWQCB.

- During dispenser and piping upgrade activities in 2003, soil analytical results indicated maximum hydrocarbon concentrations of 0.49 mg/kg TPHg, 530 mg/kg TPHd, 0.0037 mg/kg total xylenes, 0.0021 mg/kg MTBE, and 2.2 mg/kg TBA. In October 2003, the LARWQCB reopened the case for the site, and again named Chevron as RP. Chevron remained RP at the site for over 6 years before the site was closed in November 2009 by the LARWQCB. No remediation activities were conducted by Chevron prior to site closure.

- No other releases were documented at the site during this entire period from 1986 through 2009, which includes the period when Thrifty operated the facility from 1990 through 1997. As shown in Tables 1 and 2 of the attached June 24, 2015 LARWQCB letter, the maximum concentrations of TPHg, benzene, toluene, and total xylenes in soil and groundwater in the 1997 baselining assessment at the end of Thrifty's operations were in fact much lower than the pre-closure concentrations (prior to Chevron's 1996 closure).

In July and November 2012, a baseline subsurface investigation was conducted at the end of ARCO's lease and at the inception of Tesoro's lease. As summarized in the June 24, 2015 LARWQCB letter, maximum concentrations of TPHg, TPHd, benzene, MTBE, and TBA increased significantly in soil and groundwater in the 2012 baseline investigation, when compared to the 1997 baseline investigation conducted at the end of Thrifty's operation of the facility, as follows:

Soil Sample Results (in mg/kg)

	TPHg	TPHd	Benzene	MTBE	TBA
1997 Results	150	81	1.5	1.9	NA
2012 Results	2,700	1,600	22	12	3.7

Water Sample Results (in ug/l)

	TPHg	TPHd	Benzene	MTBE	TBA
1997 Results	1,500	NA	74	39	NA
2012 Results	190,000	770	21,000	59	1,100

The results clearly show significant increases in hydrocarbon constituent concentrations between the end of Thrifty operations in 1997 and the end of ARCO operations in 2012, indicating new release(s) during ARCO's operations and/or the rediscovery of Chevron's prior documented release. As previously discussed, the alleged TPHd in soil detected during the 1997 investigation (although not at an actionable level) may in fact be TPHg based on the overlap in the hydrocarbon chain.

5. How the Petitioner is Aggrieved:

   Petitioner has been aggrieved by the LARWQCB's actions because they will be subjected to provisions of an arbitrary and unfair finding unsupported by evidence in the record. Further, petitioner will be forced to unnecessarily incur substantial costs for corrective actions of a release that they did not cause or contribute to.

6. The action the petitioner requests the State Water Board to take:

   - The petitioner requests that the State Water Board remove Thrifty as a RP for the site, and if this is not possible, to name Thrifty as a Secondary RP. Where one or more responsible parties exist at a UST site, many local agencies distinguish between parties who are primarily responsible and those who are secondary responsible. State Water Board orders have found secondary liability status appropriate where, among other things, the responsible party did not initiate or contribute to the discharge (State Water Board Orders WQ 89-8 [*Arthur Spitzer et al*] and WQ 86-18 [*Vallco Park, Ltd.*].).

7. A statement of points and authorities for any legal issues raised in the petition, including citations to documents or hearing transcripts that are referred to:

   - The precedent for Secondary RP status for Thrifty is established in the State Water Water Resources Control Board Leaking Underground Fuel Tank Guidance Manual, September 2012, as well as State Water Board Orders WQ 89-8 and WQ 86-18.

   - The reference for establishing screening levels for TPHd concentrations in soil at the time of the 1997 baselining assessment was the LARWQCB's Interim Site Assessment and Cleanup Guidebook dated May 1996.

8. A statement that copies of the petition have been sent to the Regional Water Board and to the discharger, if different from the petitioner.

   The petition has been sent to the following parties:

   Mr. Sam Unger
   Los Angeles Regional Water Quality Control Board
   320 West 4th Street, Ste. 200
   Los Angeles, CA 90013

   Mr. Kyle Christie
   Atlantic Richfield Company
   4 Centerpointe Drive, Suite 200, LPR-4-221
   La Palma, CA 90623-1066

   Ms. Shelby Lathrop
   Chevron Environmental Management Company
   Marketing Business Unit
   6101 Bollinger Canyon Road
   San Ramon, CA 94583

9. A statement that the issues raised in the petition were presented to the regional board before the regional board acted, or an explanation of why the petitioner could not raise those objections before the regional board.

- The issuance of the LARWQCB June 24, 2015 letter naming Thrifty as a co-RP was completely unexpected. Thrifty could not raise objections to the LARWQCB letter, because it had no advance notice that it would be receiving such a letter.

If you should have any questions or comments regarding this transmittal or require additional information, please contact either Larry Higinbotham at (562) 921-3581, Ext. 325, Chris Panaitescu at Ext. 390, or Jeff Suryakusuma at Ext 311.

Sincerely,

Larry Higinbotham, P.G.
Project Manager
California Professional Geologist No. 5497

PROFESSIONAL GEOLOGIST
LARRY HIGINBOTHAM
Exp. 04/30/17
No. 5497
STATE OF CALIFORNIA

Jeff Suryakusuma, P.E.
Director
Technical Services

Chris Panaitescu
General Manager
Environmental Affairs

cc: Mr. Sam Unger, Los Angeles Regional Water Quality Control Board
Mr. Kyle Christie, Atlantic Richfield Company
Ms. Shelby Lathrop, Chevron Environmental Management Company
Mr. Barry Berkett, Executive Vice President, Thrifty Oil Co.
File

Attachments:

Attachment A: LARWQCB letter dated June 24, 2015, naming Thrifty Oil Co. as a RP to perform site characterization

Attachment B: Baselining Subsurface Investigation Report, dated December 22, 1997

ATTACHMENT A

CALIFORNIA
Water Boards

Los Angeles Regional Water Quality Control Board

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

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SS#213

June 24, 2015

Mr. Kyle Christie
Atlantic Richfield Company
4 Centerpointe Drive, Suite 200, LPR-4-221
La Palma, CA 90623-1066

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO.: **7012 1640 0000 6294 7049**

Ms. Natasha Molla
Chevron Environmental Management Company
P.O. Box 2292
Brea, CA 92822-2292

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO.: **7012 1640 0000 6294 7056**

Mr. Chris Panaitescu
Thrifty Oil Company
13116 Imperial Highway
Santa Fe Springs, CA 90670

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO.: **7012 1640 0000 6294 7063**

UNDERGROUND STORAGE TANK PROGRAM – DIRECTIVE TO TAKE CORRECTIVE ACTION IN RESPONSE TO UNAUTHORIZED UNDERGROUND STORAGE TANK RELEASE PURSUANT TO HEALTH AND SAFETY CODE SECTION 25296.10 AND TITLE 23, CHAPTER 16, CALIFORNIA CODE OF REGULATIONS, SECTIONS 2720 – 2727
FORMER ARCO STATION NO. 9615
(FORMER THRIFY STATION NO. 213 AND FORMER CHEVRON STATION NO. 6-1400)
29145 HEATHERCLIFF ROAD, MALIBU, CALIFORNIA
CASE NO. I-00626B; GLOBAL NO. T10000004593

Dear Mr. Christie, Ms. Molla, and Mr. Panaitescu:

Our letter dated April 10, 2013 (enclosed) required the submittal of site specific information in regards to the former ARCO Station No. 9615 located at 29145 Heathercliff Road, Malibu, California (Site). The Atlantic Richfield Company (ARCO) provided available site specific information in the report titled "Additional Site Information" dated June 13, 2013. We have reviewed the information provide by ARCO and information contained in the previous case files for the Site.

Site Background

The Site has been operated as a fuel service station for at least 40 years. The Site was operated as Chevron Station No. 6-1400 until August 1990, at which time the property was sold by Chevron to Thrifty Oil Company (Thrifty). Thrifty Station No. 213 was operated at the Site between August 1990 and June 1997. ARCO leased the Site from Thrifty and operated ARCO Station No. 9615 between June 1997 and June 2012. In June 2012, Tesoro leased the Site from Thrifty and began operating Tesoro Station No. 63213.

In August 1990, one 280-gallon waste oil underground storage tank (UST) was removed from the Site. In March 1991, three 10,000-gallon single-walled steel USTs that contained regular, unleaded, and supreme unleaded gasoline were removed from the Site. Four new double-walled fiberglass USTs that historically contained diesel and regular, unleaded, and supreme unleaded gasoline and associated piping were installed at the Site during reconfiguration activities in 1991. In 2003, the onsite dispensers and double-contained fiberglass product piping were removed and replaced with new double-contained fiberglass piping, new dispensers, and under-dispenser containment sumps.

Site Investigation History

In February 1986, International Technology Corporation (ITC) submitted a leak incident report that reported approximately 2,600 gallons of unleaded gasoline were lost from piping located between the two dispenser islands over an unknown period of time that ended in October 1985. Results of a tank audit conducted in March 1986 suggested that approximately 1,000 gallons of regular gasoline were released at the Site, occurring between the turbine and leak detector on the regular product line.

In 1986 and 1987, ITC advanced six soil borings and installed one monitoring well southeast of the dispenser islands. The maximum concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX) in soil samples collected in 1986 and 1987 were 2,200 milligrams per kilogram (mg/kg), 110 mg/kg, 350 mg/kg, 430 mg/kg, and 2,100 mg/kg, respectively. In April 1987, the Los Angeles Regional Water Quality Control Board (Regional Board) opened a case (case number I-00626) for the Site and named Chevron as the responsible party.

In 1991, six soil samples were collected in the area of the former USTs. Maximum concentrations of TPHg and BTEX in soil samples were 6,306.67 mg/kg, 54.87 mg/kg, 459.93 mg/kg, 167.66 mg/kg, and 886.74 mg/kg, respectively.

In 1993, nine soil borings were advanced at the Site and three of the borings were completed as groundwater monitoring wells MW-4, MW-5, and MW-7. Maximum concentrations of TPHg and BTEX in soil samples were 2,100 mg/kg, 34 mg/kg, 180 mg/kg, 34 mg/kg, and 210 mg/kg, respectively. Groundwater samples collected in November 1993 had maximum detections of TPHg and BTEX at concentrations of 9,500 micrograms per liter (µg/L), 1,200 µg/L, 2,400 µg/L, 310 µg/L, and 1,600 µg/L, respectively. Chevron conducted periodic groundwater monitoring events between June 1994 and April 1996. In April 1996, maximum detections of TPHg and BTEX in groundwater were at concentrations of 16,100 µg/L, 3,000 µg/L, 1,100 µg/L, 530 µg/L, and 1,100 µg/L, respectively. The Regional Board closed the case in September 1996 and the three on-site groundwater monitoring wells were not abandoned.

In June and July 1997, Pacific Environmental Group, Inc. conducted a baseline subsurface investigation at the Site for ARCO. Maximum concentrations of TPHg, total petroleum hydrocarbons as diesel (TPHd), BTEX, and methyl tertiary butyl ether (MTBE) in soil samples were 150 mg/kg, 81 mg/kg, 1.5 mg/kg, 6.1 mg/kg, 2.3 mg/kg, 17 mg/kg, and 1.9 mg/kg, respectively. In July 1997, a groundwater sample was collected from on-site well MW-7 and analytical results showed TPHg, BTEX, and MTBE were detected at concentrations of 1,500 µg/L, 74 µg/L, 12 µg/L, 2.9 µg/L, 8.0 µg/L, and 39 µg/L, respectively.

In 1998, groundwater samples were collected from on-site wells MW-4, MW-5, and MW-7. Maximum concentrations of TPHg, TPHd, BTEX, and MTBE were 2,100 µg/L, 0.85 µg/L, 620 µg/L, 400 µg/L, 110 µg/L, 370 µg/L, and 42 µg/L, respectively.

During the dispenser and piping upgrade activities in 2003, soil samples were collected beneath each dispenser and near the product piping (five samples collected in total). The maximum concentrations of TPHg, TPHd, total xylenes, MTBE, and TBA detected in soil samples were 0.49 mg/kg, 530 mg/kg, 0.0037 mg/kg, 0.0021 mg/kg, and 2.2 mg/kg, respectively. Benzene, toluene, and ethylbenzene were not detected above their respective reporting limit in all soil samples. The maximum TPHd soil detection was located beneath one of the gasoline/diesel dispensers near the existing USTs.

In October 2003, the Regional Board reopened the case for the Site under case number I-00626A and named Chevron as the responsible party. Chevron used the existing three groundwater monitoring wells at the Site to resume groundwater monitoring activities. In June 2006, groundwater samples collected from on-site wells had detections of TPHg and BTEX at maximum concentrations of 8,900 µg/L, 990 µg/L, 510 µg/L, 260 µg/L, and 740 µg/L, respectively. Tertiary butyl alcohol (TBA) was detected at a maximum concentration of 550 µg/L and MTBE was not detected above the reporting limit in groundwater samples collected in June 2006. In June 2009, maximum concentrations of TPHg, BTEX, and TBA detected in groundwater samples were 790 µg/L, 26 µg/L, 17 µg/L, 6 µg/L, 18 µg/L, and 23 µg/L, respectively. MTBE was not detected above the analytical reporting limit in groundwater samples collected in June 2009. Groundwater samples collected between 2006 and 2009 were not analyzed for TPHd. The Regional Board closed the case in July 2009 and Chevron abandoned the three groundwater monitoring wells at the Site in November 2009.

In July and November 2012, Cardno ERI conducted a baseline subsurface investigation at the Site for Tesoro. Maximum analytical concentrations for TPHg, TPHd, BTEX, MTBE, and TBA in soil samples reported by Tesoro were 2,700 mg/kg, 1,600 mg/kg, 22 mg/kg, 130 mg/kg, 44 mg/kg, 240 mg/kg, 12 mg/kg, and 3.7 mg/kg, respectively. ARCO analyzed split soil samples from the soil borings and reported maximum concentrations of 1,400 mg/kg, 23 mg/kg, 9.1 mg/kg, 55 mg/kg, 17 mg/kg, 110 mg/kg, 3.9 mg/kg, and 2.7 mg/kg for TPHg, TPHd, BTEX, MTBE, and TBA, respectively. Grab groundwater samples collected during the investigation had maximum analytical concentrations of 190,000 µg/L, 770 µg/L, 21,000 µg/L, 30,000 µg/L, 2,300 µg/L, 14,000 µg/L, 59 µg/L, and 1,100 µg/L for TPHg, TPHd, BTEX, MTBE, and TBA, respectively.

The following tables summarize the maximum detected concentrations of TPHg, TPHd, BTEX, MTBE, and TBA in soil (Table 1) and groundwater (Table 2) samples collected at the Site during subsurface investigations between 1986 and 2012.

Table 1 - Summary of Maximum TPH, BTEX, MTBE, and TBA Concentrations in Soil (mg/kg)

	TPHg	TPHd	B	T	E	X	MTBE	TBA
1986 &1987	2,200	NA	110	350	430	2,100	NA	NA
1991	6,306.67	NA	54.87	459.93	167.66	886.74	NA	NA
1993	2,100	NA	34	180	34	210	NA	NA
1997	150	81	1.5	6.1	2.3	17	1.9	NA
2003	0.49	530	ND	ND	ND	0.0037	0.0021	2.2
2012 (Tesoro)	2,700	1,600	22	130	44	240	12	3.7
2012 (ARCO)	1,400	23	9.1	55	17	110	3.9	2.7

NA = not analyzed
ND = not detected

Table 2 - Summary of Maximum TPH, BTEX, MTBE, and TBA Concentrations in Groundwater (µg/L)

	TPHg	TPHd	B	T	E	X	MTBE	TBA
1993	9,500	NA	1,200	2,400	310	1,600	NA	NA
1996	16,100	NA	3,000	1,100	530	1,100	NA	NA
1997	1,500	NA	74	12	2.9	8	39	NA
1998	2,100	0.85	620	400	110	370	42	NA
2006	8,900	NA	990	510	260	740	ND	550
2009	790	NA	26	17	6	18	ND	23
2012	190,000	770	21,000	30,000	2,300	14,000	59	1,100

NA = not analyzed
ND = not detected

Site Characterization (CCR Title 23, Chapter 16, § 2725)

Based on information provided and information from the previous case files, the Regional Board has identified the addressees listed above as responsible parties for the comingled plume. Chevron had releases during its operations and had residual contamination in the soil and groundwater when the previous cases were closed. Thrifty installed a diesel UST on the property in 1991 after purchasing the Site from Chevron in 1990. Thrifty and ARCO stored and dispensed diesel fuel during their operations and TPHd was detected in soil and groundwater. Those releases formed a comingled plume. As the owner of the referenced property, Thrifty also bears legal responsibility to comply with Regional Board requirements. Until a determination is made, all addressees listed above must jointly comply with Regional Board requirements and will be referred to as the responsible parties (RPs).

Pursuant to Health and Safety Code Section 25296.10, the RPs are required to take corrective action (i.e. Preliminary Site Assessment, Soil and Water Investigation, Corrective Action Plan Implementation, and Verification Monitoring) to ensure protection of human health, safety and the environment. Corrective action requirements are set forth in California Code of Regulations (CCR), Title 23, sections 2720 through 2727.

In order to define the extent of the adsorbed and dissolved phase hydrocarbon plumes, the RPs are required to submit a Groundwater Monitoring Well Installation Work Plan (Work Plan) by

August 15, 2015. The Work Plan must propose an adequate number of monitoring wells to define the extent of the hydrocarbon plumes.

Regulatory Requirement for Electronic Submission of Laboratory Data to the State GeoTracker Internet Database

On September 30, 2004, the State Water Resources Control Board (SWRCB) adopted the resolution to revise regulations in Chapter 30, Division 3 of Title 23 of California Code of Regulations (CCR), which requires persons to ensure electronic submission of laboratory analytical data (i.e., soil or water chemical analysis) and locational data (i.e., location and elevation of groundwater monitoring wells) via the Internet to the SWRCB's GeoTracker database. The regulations and other background information are available at http://geotracker.waterboards.ca.gov.

In accordance with the above regulations, the RPs are required to submit all future laboratory data over the Internet in the Electronic Deliverable Format to the SWRCB's GeoTracker database for any soil and/or groundwater samples obtained after September 1, 2001. This would include any sampling completed for underground storage tank system removal, site assessment activities, periodic groundwater monitoring, and post cleanup verification sampling. Per the same regulations, beginning January 1, 2002, the RPs are also required to submit locational data for all groundwater monitoring wells (i.e., latitude, longitude, and elevation survey data) together with groundwater information (i.e., elevation, depth to free product, monitoring well status, etc.) and a site map electronically to the SWRCB GeoTracker System. Hard copy paper reports are no longer required per Regional Board guidelines available at http://www.waterboards.ca.gov/losangeles/water_issues/programs/ust/guidelines/e-mr_guideline.pdf.

General Requirements

1. The contractor who conducts the environmental work as required in this directive letter shall, at all times, comply with all State laws, rules, regulations, and local ordinances specifically including, but not limited to, environmental, procurement, and safety laws, rules, regulations, and ordinances. The contractor shall obtain the services of a Professional Geologist or Engineer, Civil (PG/PE-Civil) to comply with the applicable requirements of the Business and Professions Code, sections 7800 et seq. implementing regulations for geological or engineering analysis and interpretation for this case. All documents prepared for others by the contractor that reflect or rely upon geological or engineering interpretations by the contractor shall be signed or stamped by the PE/PE-Civil indicating her/his responsibility for them as required by the Business and Professions Code.

2. Effective November 1, 2011, the Los Angeles Regional Water Quality Control Board implemented a Paperless Office system. For all parties who upload electronic documents to the GeoTracker Database, it is no longer necessary to email a copy of these documents to losangeles@waterboards.ca.gov or submit hard copies to our office. The Regional Board will no longer accept documents (submitted by either hard copy or email) already uploaded to GeoTracker.

Enforcement

As noted above, the RPs are required to submit the Work Plan by **August 15, 2015**.

Pursuant to section 25299(d) of the Health and Safety Code, any person who violates any corrective action requirement established by, or issued pursuant to, section 25296.10 is liable for a civil penalty of not more than ten thousand dollars ($10,000) for each underground storage tank for each day of violation. A civil penalty may be imposed by civil action pursuant to section 25299(d)(2) or imposed administratively by the Regional Board pursuant to Water Code sections 13323 through 13328. The Regional Board may also request that the Attorney General seek judicial civil liabilities or injunctive relief pursuant to California Water Code sections 13262, 13264, 13304, 13331, 13340, and 13386. The Regional Board reserves its right to take any further enforcement action authorized by law.

If you have any questions regarding this matter, please contact Mr. James W. Ryan IV at (213) 576 – 6711 or at jamesw.ryan@waterboards.ca.gov.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Enclosure: Regional Board Letter Dated April 10, 2013

cc: Kathy Jundt, State Water Resources Control Board,
Underground Storage Tank Cleanup Fund
Tim Smith, Los Angeles County Department of Public Works,
Environmental Program Division
Phuong Ly, Water Replenishment District of Southern California
Lusi Mkhitaryan, County of Los Angeles, Department of Public Health
Rob Donovan, Tesoro Refining and Marketing Company

April 10, 2013

Mr. John Skance
Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583

Underground Storage Tank Program – Directive to Take Corrective Action in Response to Unauthorized Underground Storage Tank Release Pursuant to Health and Safety Code Section 25296.10 and Title 23, California Code of Regulations, Sections 2720-2727
Request for Additional Information
FORMER ARCO STATION #9615
29145 HEATHERCLIFF ROAD, MALIBU, CALIFORNIA
(I.D. I-00626B)

Dear Mr. Skance:

This office reviewed the report entitled "Phase II Baseline Report," dated February 1, 2013, submitted by Thrifty Oil Co. Based on this report, there is soil and groundwater contamination at the site. Pursuant to Health and Safety Code section 25296.10, Atlantic Richfield Company (ARCO) is required to take corrective action (i.e., Preliminary Site Assessment, Soil and Water Investigation, Corrective Action Plan Implementation, and/or Verification Monitoring) to ensure protection of human health, safety, and the environment. Corrective action requirements are set forth in California Code of Regulations (CCR), title 23, sections 2720 through 2727.

The California Regional Water Quality Control Board, Los Angeles Region, is the public agency with primary responsibility for the protection of groundwater and surface water quality for all beneficial uses within the Los Angeles and Ventura counties. As such, we are the lead regulatory agency for overseeing corrective action (assessment and/or monitoring activities) and cleanup of releases from leaking underground storage tank (UST) systems at the subject site.

To facilitate our review, we would appreciate that you provide the following information regarding the referenced site that has not already been submitted (see above):

1. Facility contact person's name, phone number, and email address, if any;
2. Facility mailing address;
3. Contaminant release information (e.g., copy of Site Assessment Report);
4. Tank removal and/or repair information (include tank size and contents, removal and/or repair date);

5. Tank disposal documentation;
6. Copies of all previous site assessment and/or remediation report(s), if any;
7. Reports of all previous soil and groundwater sample analytical results, if any;
8. Name, telephone number, and email address of your environmental consultant, if any;
9. Copies of all correspondence regarding environmental assessment for the subject site;

10. Property Owner Information

Pursuant to the California Health and Safety Code Chapter 6.75 (Section 25299.37.2) and Division 7 of the Porter Cologne Water Quality Control Act under AB 681, the Regional Board is required to notify all current fee title holders for the subject site or sites impacted by releases from underground storage tanks prior to considering corrective action and cleanup or case closure. If corrective action data from the site indicate that release(s) from the underground storage tank systems have impacted offsite property, we are also required to notify offsite property owners. Therefore, you are required to provide to this Regional Board the name, mailing address, and phone number for any record fee title holders for the subject site and any offsite property(ies) impacted by releases from the subject site, together with a copy of county record of current ownership (grant trust deed), available from the County Recorder's Office, for each property affected. Or as an alternative, you can complete this Regional Board's "Certification Declaration for Compliance with Fee Title Holder Notification Requirements," for each site (available at http://www.waterboards.ca.gov/losangeles/html/programs/ust/AB681_form.pdf). Copies of future technical reports shall also be sent directly to the property owner of the site and to any other property owner(s) impacted by contamination from the site. You are also responsible to provide new contact information if the property owner(s) changes. The new owner shall comply with the requirement stated above. The above requested information is due to this Regional Board, no later than **June 15, 2013.**

11. Regulatory Requirement for Electronic Submission of Laboratory Data to the State Geotracker Internet Database.

On September 30, 2004, the State Water Resources Control Board (SWRCB) adopted the resolution to revise regulations in Chapter 30, Division 3 of Title 23 of California Code of Regulations (CCR), which requires persons to ensure electronic submission of laboratory analytical data (i.e., soil or water chemical analysis) and locational data (i.e., location and elevation of groundwater monitoring wells), via the Internet to the SWRCB's GeoTracker database. The regulations and other background information are available at http://geotracker.waterboards.ca.gov. In accordance with the above regulations, you are required to submit all laboratory data over the Internet in the Electronic Deliverable Format to the SWRCB's GeoTracker database for any soil and/or groundwater samples obtained after September 1, 2001. This would include any sampling completed for underground storage tank system removal, site assessment activities, periodic groundwater monitoring, and post cleanup verification sampling. Per the same regulations, you are also required to submit locational data for all groundwater monitoring wells (i.e., latitude, longitude, and elevation survey data) together with groundwater information (i.e., elevation, depth to free product, monitoring well status,

etc.) and a site map commencing January 1, 2002. A complete copy of all clean-up and monitoring reports since January 1, 2005, must also be submitted to GeoTracker, while hard copy paper reports for the main contents are still required per Regional Board guidelines available at http://www.waterboards.ca.gov/losangeles/html/programs/ust/04_0621_e-QMRGuideline6-04.pdf.

12. Effective December 12, 2011, for all parties who upload electronic documents to the State GeoTracker database, it is no longer necessary to e-mail a copy of these documents to losangeles@waterboards.ca.gov or submit hard copies or CDs to our office. The Regional Board will no longer accept documents (submitted by either hard copy or e-mail) already uploaded to GeoTracker. Further details can be viewed at the following weblink: http://www.waterboards.ca.gov/losangeles/resources/Paperless/Paperless%20Office%20for%20GT%20Users.pdf.

If you have any questions regarding this matter, please contact me at (213) 576-6711 or send me an email at jhuang@waterboards.ca.gov.

Sincerely,

Jay C. Huang

Jay C. Huang, P.G., C.E.G.
Associate Engineering Geologist
Underground Tank Section/LA Coastal

Enclosure: Leaking UST Program Certification Declaration for Compliance with Fee Title Holder Notification Requirements (Assembly Bill 681)

cc: Kathy Jundt, State Water Resources Control Board, Underground Storage Tank Cleanup Fund
Tim Smith, Los Angeles County Department of Public Works, Environmental Program Division
Phuong Ly, Water Replenishment District of Southern California
Richard Lavin, County of Los Angeles, Department of Health Services
Chris Panaltescu, Thrifty Oil Co.

ATTACHMENT B

PACIFIC
ENVIRONMENTAL
GROUP INC.

December 22, 1997

Thrifty Oil Company
13539 East Foster Road
Santa Fe Springs, California 90670

Subject: Baselining Subsurface Investigation Report
Thrifty Service Station No. 213
29145 Heathercliff Road
Malibu, California
PACIFIC Project No. 732-038.1A

Dear Thrifty:

Pacific Environmental Group, Inc. (PACIFIC) was contracted to conduct a baselining subsurface investigation at the subject site. The purpose of the investigation was to baseline environmentally related subsurface conditions at 29145 Heathercliff Road, Malibu, CA. Results of the subsurface investigation are summarized in the paragraphs below and in the enclosed attachments.

Scope of Work

On May 8, 1997, PACIFIC visited the site to mark the proposed soil boring locations. Underground Service Alert (USA) was notified of the drilling. In addition to USA, a geophysical company (Spectrum E.S.I.), visited the site to clear each proposed soil boring location on May 22, 1997. On May 27, 1997, PACIFIC visited the site to collect soil samples beneath each dispenser. No soil samples were collected since underdispenser containment was present. On June 26, 1997, and July 21, 1997, PACIFIC conducted site investigation activities in the areas of the underground storage tanks and the dispenser islands which included drilling soil borings and installing groundwater monitoring wells. A copy of the standard operating procedures for soil sampling, installing, and developing groundwater monitoring wells are attached. One of the soil borings was converted to a groundwater monitoring well. See the attached figure for soil boring locations and drilling depths. See the attached soil boring and well construction logs for boring-specific information.

On July 25, 1997, PACIFIC returned to the site to collect groundwater samples from the newly installed well (TDD-4). Groundwater samples were collected from the well using procedures summarized in the standard operating procedures for groundwater sampling attached to this report.

Soil samples and groundwater samples collected during field activities were submitted to Del Mar Analytical, a California Department of Health Services-certified laboratory, located in Irvine, California. A total of 52 soil samples and 2 groundwater samples were relinquished to

the laboratory. A total of 15 soil samples and 2 groundwater samples were analyzed for total petroleum hydrocarbons as gasoline and diesel, benzene, toluene, ethylbenzene, xylenes, methyl *tert*-butyl ether, total recoverable petroleum hydrocarbons, volatile organic compounds, and title 22 metals. Results of soil sample and groundwater sample analyses are summarized in Tables 1 and 2, respectively. Copies of the certified analytical reports are attached.

On September 15, 1997, PACIFIC returned to the site to conduct well abandonment activities. Groundwater monitoring well TDD-4 was abandoned using the pressure grout method summarized in the standard operating procedures for well destruction attached to this report.

Site Geology

Thrifty Station No. 213 is located in the City of Malibu at an elevation of approximately 206 feet above mean sea level (msl). Local topography slopes to the southeast at approximately 0.033 foot per foot (USGS, 1950). The site is underlain by Quaternary colluvial and marine deposits. Beneath the Quaternary age deposits the lithology consists of the Miocene Monterey Formation to an unknown depth (DWR, 1961). Soil types encountered during the site investigation consisted predominantly of sand and silty sand from ground surface to the total depth of the investigation. Groundwater was encountered at a depth of approximately 84 feet below ground surface (bgs).

Closing Comments

The information contained in this report represents our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you should have any questions, please call either of the undersigned at (626) 351-4814.

Sincerely,

PACIFIC ENVIRONMENTAL GROUP, INC.

Chris Rohlfing
Sr. Staff Geologist

Gary P. Pestana, R.G.
Project Manager

cc: Kateri Luka

G:\PROJECT\732\REPORTS\9615-213.DOC

Attachments: Site Plan Showing Soil Boring Locations
Geophysical Site Map
Table 1: Analytical Summary - Soil Samples
Table 2: Analytical Summary - Groundwater Samples
Soil Boring/Well Construction Logs
Laboratory Report and Chain-of-Custody Documentation
Equipment Decontamination Technique
Standard Operating Procedures for Soil Sampling Techniques
Standard Operating Procedures for Installing Groundwater Monitoring Wells
Standard Operating Procedures for Developing Groundwater Monitoring Wells
Standard Operating Procedures for Groundwater Sampling Techniques
Standard Operating Procedure for Well Destruction of Groundwater Monitoring and Soil Vapor Extraction Wells - Pressure Grout Method

References

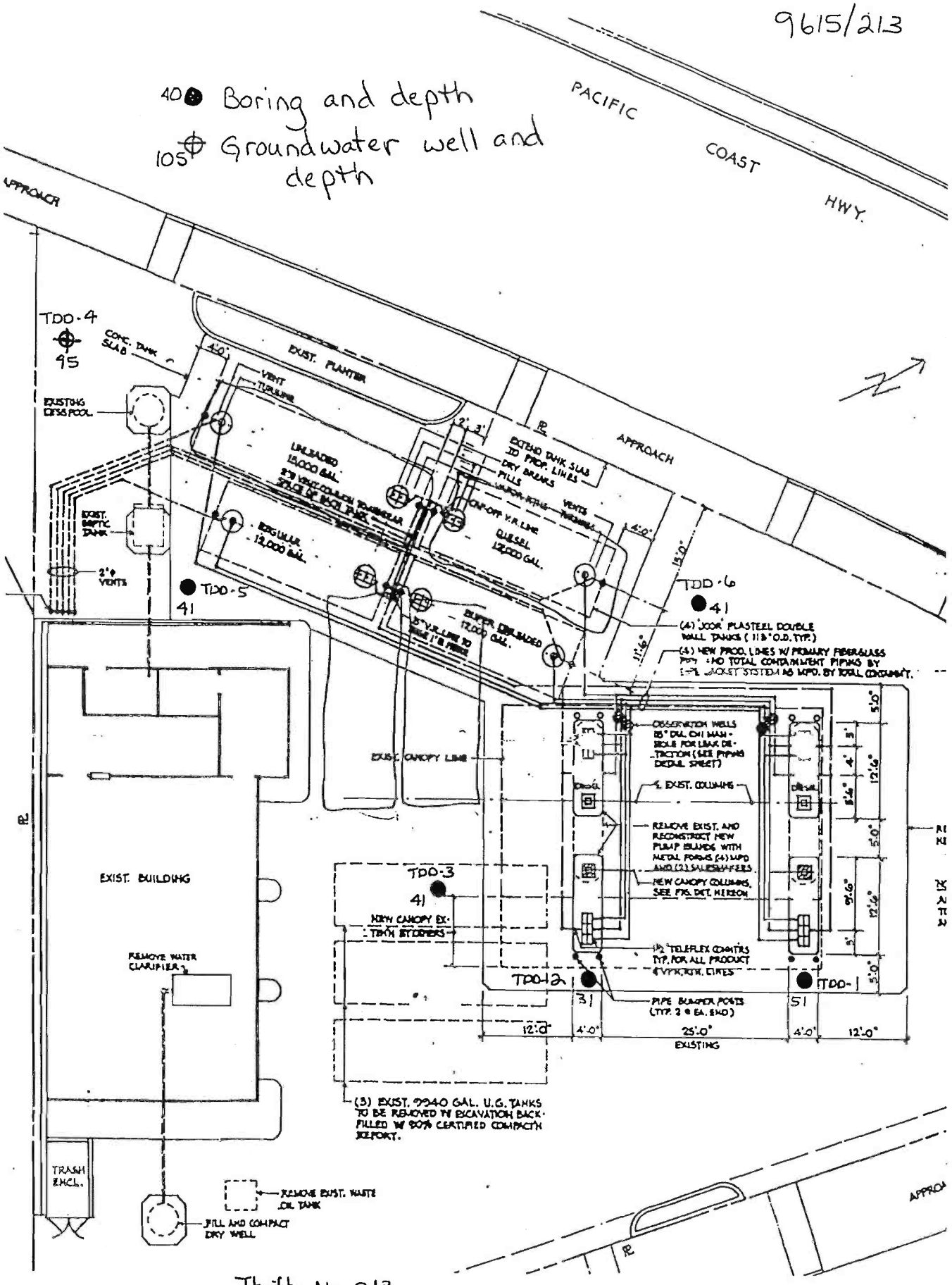
Department of Water Resources (DWR), 1961 Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County.

United States Geological Survey (USGS), 1950, Point Dume Quadrangle, 7.5 minute topographic, photorevised 1981 and 1994.

9615/213

40 ● Boring and depth

105 ⊕ Groundwater well and depth



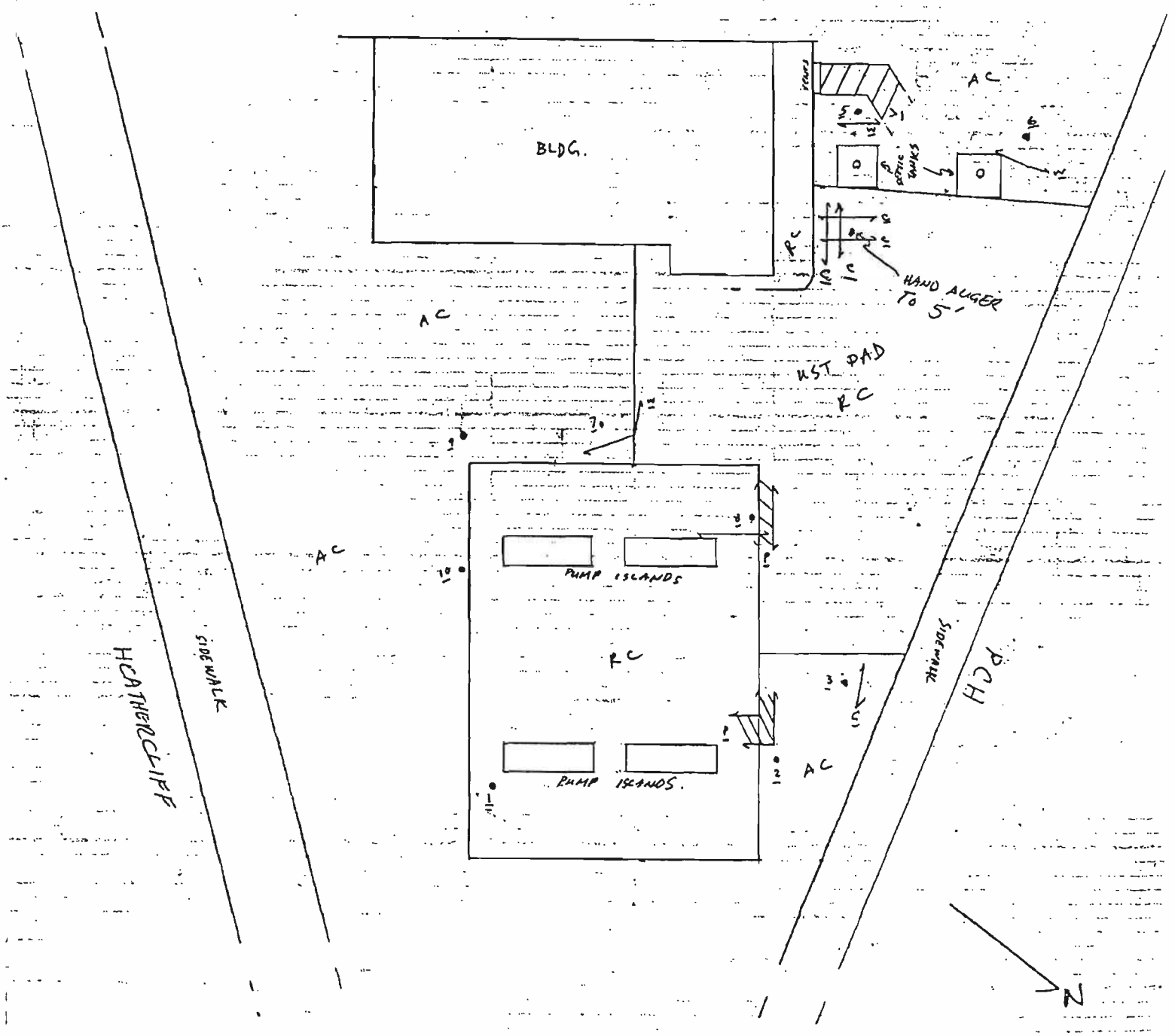
Thrifty No. 213
29145 Heathercliff Road
Malibu, CA

SPECTRUM E.S.I.
622 GLENOAKS BLVD.
SAN FERNANDO, CA 91340
(818) 365-9371

Arco No. 9615 Thrifty No. 213 Date 5-22-97

Project No. 9705.204F Scale 1"=20' Client P.G.G.

No. of borings: 10 Results of W/O search N/A



Explanation

Rc	reinforced concrete
Ac	asphalt
——	trend continues
—— ?	continuing trend unkown
● 1	PROPOSED BORING W/#
Conduits	
—c—	conduit
—e—	electric
—t—	telephone
—s—	sewer
—w—	water
—p—	product
—v—	vent

Please note not all below ground facilities may be noted on this site.

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite I, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

TABLE 1
ANALYTICAL SUMMARY - SOIL SAMPLES
Thrifty 213
29145 HEATHERCLIFF RD
MALIBU, CALIFORNIA

Sample I.D.	Sampled	TPHg	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
		Concentration (mg/Kg)					
TDD-1-15	6/26/97	<1.0	0.12	0.14	0.0084	0.063	<1.0
TDD-1-25	6/26/97	1.5	0.30	0.33	0.029	0.19	<1.0

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

The data contained on the certified reports are reviewed for accuracy and completeness and should take precedence over this summary table. This report shall not be reproduced, except in full, without written permission.

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Del Mar Analytical

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TABLE 1
ANALYTICAL SUMMARY - SOIL SAMPLES
Thrifty #213
29145 HEATHERCLIFF RD.
MALIBU, CALIFORNIA

Sample I.D.	Sampled	TPHg	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TPHd
		Concentration (mg/Kg)						
TDD-1-40	7/21/97	7.1	0.44	0.89	0.084	0.58	<0.05	<5.0
TDD-1-50	7/21/97	8.2	0.85	1.6	0.12	0.76	<0.05	5.7
TDD-2-25	7/21/97	<1.0	0.14	0.13	0.025	0.16	1.9	<5.0
TDD-2-30	7/21/97	150	0.61	5.3	2.3	17	<2.5	81
TDD-3-25	7/21/97	95	1.5	6.1	1.1	8.3	<3	26
TDD-3-40	7/21/97	29	0.53	1.7	0.50	4.6	0.65	46
TDD-4-35	7/22/97	<1.0	<0.005	<0.005	<0.005	<0.015	<0.05	<5.0
TDD-4-50	7/22/97	<1.0	<0.005	<0.005	<0.005	<0.015	<0.05	<5.0
TDD-4-85	7/22/97	<1.0	<0.005	<0.005	<0.005	<0.015	<0.05	42
TDD-5-25	7/22/97	<1.0	<0.005	<0.005	<0.005	<0.015	<0.05	<5.0
TDD-5-40	7/22/97	<1.0	<0.005	<0.005	<0.005	<0.015	<0.05	<5.0
TDD-6-30	7/23/97	<1.0	0.023	0.045	0.0057	0.034	<0.05	<5.0
TDD-6-40	7/23/97	<1.0	0.057	0.10	0.010	0.052	<0.05	<5.0

DEL MAR ANALYTICAL (ELAP #1855)

Mary Ann Linsel
Project Manager

V7071262.PEG

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Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

TABLE 2
ANALYTICAL SUMMARY - WATER SAMPLES
Thrifty 213
29145 HEATHERCLIFF RD
MALIBU, CALIFORNIA

Sample I.D.	Sampled	TPHg	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
		Concentration (ug/L)					
MW-7	7/25/97	1,500	74	12	2.9	8.0	39
TDD-4	7/25/97	<50	<0.30	<0.30	<0.30	<0.60	<10

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-1A
PAGE 1 OF 1

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 6-26-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 8"
HOLE DEPTH: 0-25'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				2				
				4				
				6			SP	SANDSTONE: light brown with black and rust mottling, moist, very dense
		0	50	8				
				10			SP	SANDSTONE: white-light brown, moist, very dense, crumbly
		20	50	12				
				14				
			15				SP	SANDSTONE: white-medium brown, moist, odor, medium dense, crumbly, sticky
			8	16				
		250	17	18				
			18	20			SP	SANDSTONE: medium-dark brown, dry, odor, very dense
			31					
		200	35	22				
				24			SP	SANDSTONE: light-mediumbrown with gray laminations, moist, odor, very dense
		450	50	26				
				28				
				30				
				32				TEMPORARY TOTAL DEPTH AS OF 6-26-97 AUGER REFUSAL.
				34				
				36				
				38				
				40				
				42				
				44				

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-1B
PAGE 1 OF 2

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 8"
HOLE DEPTH: 25 - 50'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24				
		520	50	26, 28, 30			SP	SANDSTONE: lightbrown, moist, odor, very dense
		740	50	32, 34, 36			SP	SANDSTONE: lightbrown with medium brown laminations moist, odor, very dense
		840	50	38, 40, 42, 44			SP	SANDSTONE: lightbrown with gray mottling, moist, odor, very dense

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-1B
PAGE 2 OF 2

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout		750	27 50	46 48				SP	SANDSTONE: light brown, moist, odor, very dense
		890	50	50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88				SP	SANDSTONE: light brown with medium and dark brown mottling and black laminations, moist, odor, very dense BOTTOM OF BORING AT 51'

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-2
PAGE 1 OF 1

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 6"
HOLE DEPTH: 31'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

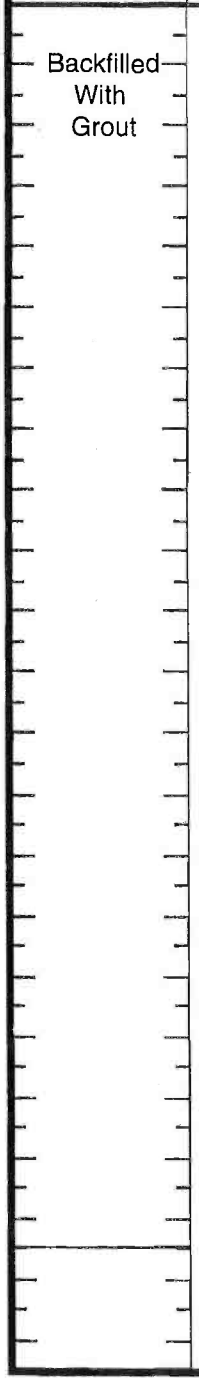
WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout		0	50	2–6			SP	SANDSTONE: light-medium brown with reddish brown laminations, dry, very dense
		110	50	8–12			SP	SANDSTONE: light brown with black mottling, dry, odor, very dense
		110	50	14–18			SP	SANDSTONE: light brown with medium brown mottling, dry, odor, dense
		580	50	20–24			SP	SANDSTONE: medium brown with light gray mottling, moist, odor, very dense
		1,000+	50	26–28			SP	SANDSTONE: light brown with gray and black mottling, moist, odor, very dense
		850	50	30			SP	SANDSTONE: light brown, moist, odor, very dense
				32–44				BOTTOM OF BORING AT 31'

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-3
PAGE 1 OF 1

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 8"
HOLE DEPTH: 41'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA



MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
		18	4	ML	SANDY SILT: fine grained, medium brown-medium gray, moist, odor, hard
		27	6		
	160	50	8		
		12	10	SM	SILTY SAND: fine-medium grained, light brown-medium gray, moist, odor, dense
		18			
	740	50	12		
			14		
		8		SP	SANDSTONE: light-medium brown with reddish brown laminations, moist, odor, medium dense
		10	16		
	390	15	18		
			20	SP	SANDSTONE: light brown with light gray, reddish brown and black mottling, moist, odor, very dense
	1,000+	50	22		
			24	SP	SANDSTONE: light brown with light gray, reddish brown and black mottling, moist, odor, very dense
	1,000+	50	26		
			28		
	820	50	30	SP	SANDSTONE: medium brown-reddish brown with light brown mottling, moist, odor, very dense
			32		
			34		
	780	50	36	SP	SANDSTONE: light brown with medium brown mottling, moist, odor, very dense
			38		
	580	50	40	SP	SANDSTONE: light-medium brown, moist, odor, very dense
			42		
			44		

BOTTOM OF BORING AT 41'

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-4
PAGE 1 OF 3

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: PVC
SLOT SIZE: 0.020"
SAND PACK: #3

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 8"
HOLE DEPTH: 95'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

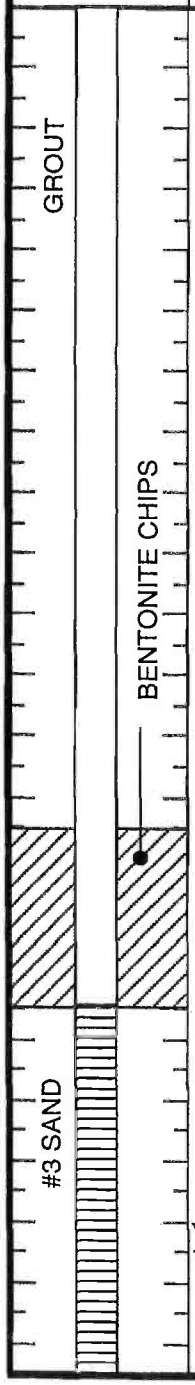
WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				2				ASPHALT 3"
		0	18 29 41	4 6			SM	SILTY SAND: fine-medium grained, light brown, moist, very dense
		0	50	8 10			SP	SANDSTONE: light brown with ligh gray and black mottling, moist, very dense
		15	50	12 14 16			SP	SANDSTONE: medium brown with ligh gray and reddish brown laminations, moist, very dense
		45	50	18 20			SP	SANDSTONE: light brown with reddish brown mottling, dry, odor, very dense
		30	50	22 24 26			SP	SANDSTONE: light brown with reddish brown mottling, dry, odor, very dense
		30	50	28 30			SP	SANDSTONE: medium brown-reddish brown with black mottling, dry, very dense
		70	50	32 34 36			SP	SANDSTONE: light brown with black mottling, moist, very dense
		30	50	38 40			SP	SANDSTONE: lightbrown with white mottling and reddish brown laminations, moist, very dense
		85	50	42 44			SP	SANDSTONE: light brown with reddish brown mottling and light gray laminations, moist, very dense

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-4
PAGE 2 OF 3

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA



MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
			46				
			48				
	120	50	50			SP	SANDSTONE: light-dark brown , dry, very dense
			52				
			54				
	100	50	56			SP	SANDSTONE: dark brown with rust mottling,dry, very dense
			58				
	35	50	60			SP	@ 55'; as above
			62				
			64				
	25	50	66			SP	SANDSTONE: dark brown-black, dry, very dense
			68				
	45	50	70			SP	SANDSTONE: black, dry, very dense
			72				
			74				
	50	50	76			SP	SANDSTONE: olive-black, dry, odor, very dense
			78				
	55	50	80			SP	@75'; as above
			82				
▽			84				
	30	50	86			SP	SANDSTONE: black, wet, odor, very dense
			88				

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-4
PAGE 3 OF 3

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
#3 SAND			50	90 92 94 96 98 100 102 104 106 108 110 112 114 116 118 120 122 124 126 128 130 132					No recovery BOTTOM OF BORING AT 95'

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-5
PAGE 1 OF 1

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 8"
HOLE DEPTH: 41'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				2		
			5	4		
			5	6	SM	SILTY SAND: fine-medium grained, reddish brown, moist, loose
		0	5	8		
			8	10	SM	SILTY SAND: fine-medium grained, fine gravel, medium brown, moist, medium dense
		0	10	12		
			12	14		
			5	16	SM	SILTY SAND: fine grained, medium brown, moist, medium dense
		0	7	18		
			8	20	SP	SANDSTONE: light brown with reddish brown laminations, moist, very dense
		0	50	22		
				24	SP	SANDSTONE: light gray with light brown and reddish brown laminations, moist, very dense
		0	50	26		
				28		
		18	50	30	SP	SANDSTONE: light brown pink mottling, dry, very dense
				32		
				34		
		15	50	36	SP	SANDSTONE: light gray with pink and olive mottling, dry, very dense
				38		
		0	50	40	SP	@ 35'; as above
				42		
				44		BOTTOM OF BORING AT 41'

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. TDD-6
PAGE 1 OF 1

PROJECT NO. 732-038.1A
LOGGED BY: C. ROHLFING
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: SPLITSPOON
CASING TYPE: NA
SLOT SIZE: NA
SAND PACK: NA

CLIENT: THRIFTY
DATE DRILLED: 7-21-97
LOCATION: THRIFTY # 213
HOLE DIAMETER: 8"
HOLE DEPTH: 41'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				2				
				4				
				6			SP	SANDSTONE: medium brown-light gray with olive mottling, moist, odor, very dense
		50	50	8				
				10			SP	SANDSTONE: light gray wtih light brown and olive mottling, moist, odor, very dense
		35	50	12				
				14				
				16			SP	SANDSTONE: light gray-olive with light brown and white laminations, moist, odor, very dense
		30	50	18				
				20			SP	SANDSTONE: light brown with rust and black mottling, dry, odor, very dense
		40	50	22				
				24			SP	SANDSTONE: light brown with rust laminations, dry, odor, very dense
		150	50	26				
				28				
		200	50	30			SP	SANDSTONE: light-medium brown, dry, odor, very dense
				32				
				34				
		40	50	36			SP	SANDSTONE: medium brown with light brown mottling, moist, odor, very dense
				38				
		160	50	40			SP	SANDSTONE: light-medium brown, moist, odor, very dense
				42				
				44				BOTTOM OF BORING AT 41'

7S2-050-14

APPLICATION FOR WELL PERMIT
ENVIRONMENTAL HEALTH 2525 Corporate Place Monterey Park, Ca 91754
COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES

DATE 8-29-97

DESCRIPTION

TYPE OF PERMIT (CHECK)

- ☐ NEW WELL CONSTRUCTION
- ☐ RECONSTRUCTION OR RENOVATION
- ☒ DESTRUCTION

TYPE OF WELL

- ☐ PRIVATE DOMESTIC
- ☐ PUBLIC DOMESTIC
- ☐ IRRIGATION
- ☒ OBSERVATION/MONITORING
- ☐ CATHODIC
- ☐ INDUSTRIAL
- ☐ GRAVEL PACK
- ☐ TEST

TYPE OF CASING: Schedule 40 PVC

METHOD OF SEALING OF CASING:

METHOD OF DESTRUCTION: Remove traffic box, overdrill boring, backfill with bentonite grout, neat cement.

LOCATION

ADDRESS (NUMBER, STREET, AND NEAREST INTERSECTION): 29145 Heathercliff Rd @ PCH TOC # 213

CITY: Malibu

DIAGRAM (SHOW PROPERTY LINES, STREET, ADDRESS, WELL SITE, SEWERS, AND PRIVATE SEWAGE DISPOSAL SYSTEMS ALONG WITH LABELS AND DIMENSIONS)

APPLICANT

NAME OF WELL DRILLER (PRINT): West Hazmat Drilling Co.

TRADE NAME: 1016 E Katella Ave

BUSINESS ADDRESS: Anaheim, CA

CITY

NAME OF WELL OWNER (PRINT): Thrifty Oil Co.

MAILING ADDRESS: 10000 Lakewood Blvd.

CITY: Downey CA 90240

I hereby agree to comply in every respect with all regulations of the County Preventive/Public Health Services and with all ordinances and laws of the County of Los Angeles and of the State of California pertaining to well construction, reconstruction and destruction. Upon completion of well and within ten days thereafter, I will furnish the County Preventive/Public Health Services with a complete log of the well, giving date drilled, depth of well, all perforations in casing, and any other data deemed necessary by such County Preventive/Public Health Services.

E K O'Connell
Applicant's Signature

DATE

DISPOSITION OF APPLICATION: (For Sanitarians Use Only)

- ☐ APPROVED
- ☐ DENIED
- ☐ APPROVED WITH CONDITIONS

If denied or approved with conditions, report reason or conditions here:

Need approved copy

DATE

When signed by Section Chief, this application is a permit.

76A668
H-13 (Rev. 3/91)

APPLICANT

Please Return All Copies

213

SERVICE APPLICATION AND FEE COLLECTION
COUNTY OF LOS ANGELES - DEPARTMENT OF HEALTH SERVICES
PUBLIC HEALTH PROGRAMS - ENVIRONMENTAL HEALTH

SERVICE REQUEST APPLICATION

INSTRUCTIONS

1. Check the TYPE OF SERVICE requested and attach the required non-refundable fee to the application. Make money order or check payable to LOS ANGELES COUNTY TREASURER, DO NOT SEND CASH. This application is nontransferable.

FEE REQUIRED*		TYPE OF SERVICE
_____	☐	MONITORING WELL CONSTRUCTION/DESTRUCTION
133.00	☒	WELL CONSTRUCTION, RENOVATION OR DESTRUCTION PERMIT Complete and attach a Well Permit Application
_____	☐	PRIVATE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT
_____	☐	PRIVATE SEWAGE DISPOSAL SYSTEM RENOVATION/EXPANSION
_____	☐	INSPECTION OF MOUNTAIN CABIN SITE as required by the United States Forest Service
_____	☐	INSPECTION OF EXISTING PRIVATE SEWAGE SYSTEM as required by FHA/VA
_____	☐	WATER SUPPLY TEST AND CERTIFICATION as required by U.S. Department of Agriculture

2. Check with Contact Office stamped below for requirements or information.
3. Complete the required information or deliver the completed application, money order or check with the forms indicated.

to: County of Los Angeles
Department of Health Services
Public Health Programs
Environmental Health
2525 Corporate Place
Monterey Park, Ca 91754
(213) 881-4147

*Refer to Schedule of Fees for current fiscal year.

NOTE: FIELD PERSONNEL CANNOT ACCEPT FEES.

4. Phone Contact Office noted below, after you have received your receipt, to request an inspection.

29145 Heathercliff Rd, Malibu, CA 8-29-97
Service/Job Location Address Date 310-923-9876 x390

Thrifty Oil Co, 10000 Lakewood Blvd, Downey, CA 90240
Owner/Applicant's Name Address Phone No. 626-351-4814

Pacific Environmental Group, Inc 650 N. Sierra Madre Villa, #104, Pasadena CA 91101
Contractor's Name Address Phone No.

Co. Engineer Plan Check No._____ Tract No. _____ Lot No._____ No. Bedrooms ____
(Complete line above for Private Sewage Disposal System Construction or Renovation Application)

CONTACT OFFICE	DEPARTMENT STAMP

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2465 W. 12th St., Suite I, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jun 26, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jun 27, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/CA DHS Mod. 8015/8020	Extracted: Jul 8, 1997
Attention: Erin O'Connell	First Sample #:	GF05861	Analyzed: Jul 8, 1997
			Reported: Jul 11, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
GF05861	TDD-1-15	N.D.	0.12	0.14	0.0084	0.063
GF05862	TDD-1-25	1.5	0.30	0.33	0.029	0.19
Reporting Limit:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.015**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jun 26, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jun 27, 1997
Pasadena, CA 91107	Analysis Method:	EPA 3550/CA DHS Mod. 8015	Extracted: Jul 7, 1997
Attention: Erin O'Connell	First Sample #:	GF05861	Analyzed: Jul 8, 1997
			Reported: Jul 11, 1997

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description Soil	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
GF05861	TDD-1-15	N.D.	N.A.
GF05862	TDD-1-25	N.D.	N.A.

Reporting Limit:	**5.0**

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

Celebrating 10 years of service 1987-1997

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jun 26, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jun 27, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/8020	Extracted: Jul 8, 1997
Attention: Erin O'Connell	First Sample #:	GF05861	Analyzed: Jul 8, 1997
			Reported: Jul 11, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
GF05861	TDD-1-15	N.D.
GF05862	TDD-1-25	N.D.

Reporting Limit:	1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 8, 1997
Analyzed: Jul 8, 1997
Reported: Jul 11, 1997
Matrix: Soil

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
Method Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limit:	**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.015**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 7, 1997
Analyzed: Jul 8, 1997
Reported: Jul 11, 1997
Matrix: Soil

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Description	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
Method Blank	N.D.	N.A.

Reporting Limit:	5.0

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

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Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 8, 1997
Analyzed: Jul 8, 1997
Reported: Jul 11, 1997
Matrix: Soil

MTBE (EPA 8020 MODIFIED)

Laboratory Description	Sample Result mg/Kg (ppm)
Method Blank	N.D.

Reporting Limit:	1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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MS/MSD DATA REPORT

EPA METHOD: **8015 by extraction**
Matrix: Soil

DATE: 7/7/97

SAMPLE #: GG00683

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbons	50	50	64	110	28%	120%	53%	74%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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LABORATORY CONTROL SAMPLE

EPA METHOD: 8015 by extraction

DATE: 7/7/97

Analyte	St	R1	PR
	ppm	ppm	%
Hydrocarbons	50	38	76%

Definition of Terms:

St..... Standard Concentration

R1..... Standard Result

PR..... Percent Recovery of R1; (R1 / St) X 100

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MS/MSD DATA REPORT

EPA Method 8015/8020

Matrix: Soil

Date: 07/08/97

Sample #: GF05499

Batch #: GG08151S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR		Acceptance Limits	
	ppm	ppm	ppm	ppm	%	%	%	%		RPD	Mean PR
TPH	0.078	1.1	0.95	0.84	80	69	13	74	*	≤30	81 - 129
Benzene	0.0022	0.10	0.093	0.093	90	91	0.61	91		≤25	83 - 115
Toluene	0.0029	0.10	0.084	0.081	81	78	2.6	80		≤25	80 - 115
Ethylbenzene	0	0.10	0.085	0.080	85	80	5.4	82	*	≤25	83 - 115
Xylenes	0.0013	0.30	0.26	0.25	86	81	5.2	84	*	≤25	85 - 118

* Refer to LCS for batch validation.

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits..... Determined by in-house Control Charts

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

LCS DATA REPORT

EPA Method 8015/8020

Matrix: Soil

Date: 07/08/97

Sample #: BLANK

Batch #: GG08151S

Analyte	Spike Conc.	Result	% Recovery	ACP
TPH	1.1	1.2	107	85 - 115 %
Benzene	0.10	0.098	98	85 - 115 %
Toluene	0.10	0.093	93	85 - 115 %
Ethylbenzene	0.10	0.10	100	85 - 115 %
Xylenes	0.30	0.31	102	85 - 115 %

Definition of Terms

LCS ..... Laboratory Control Sample
Spike Conc ..... Result of Sample Analysis
Result ..... Result of Laboratory Control Sample Analysis
%Recovery ..... Percent Recovery of LCS; ((Result - Spike Conc.) / Spike Conc.) X 100
ACP ..... Acceptance Limits for Percent Recovery
TPH ..... Total Petroleum Hydrocarbons

Del Mar Analytical

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

1/1

9615-97-01

CHAIN OF CUSTODY FORM

Client Name/Address: Thrifty Oil Co. 10000 Lakewood Ave Downey, CA

Project/PO Number: Thrifty #213 Heathcliff & PCH Malibu, CA

Project Manager/Phone Number: Erin O'Connell PEG 818-351-4814

Sampler: Chris Rohlfing PEG # 732-038.19

Sample Description	Sample Matrix	Container Type	#of Cont	Sampling Date/Time	Preservatives	8015m TPHg	8015m TPHd	8020 BTEX, MtBE						HOLD	Special Instructions
	~~Soil~~	BRASS LINER	1	6-26-97 7:56	ICE									X	Quantify MtBE Results
TDD-1-5	"	"	1	" ~~8:05~~ 7:56	"									X	
TDD-1-10	"	"	1	" ~~8:12~~ 8:05	"									X	
TDD-1-15	"	"	1	" ~~8:18~~ 8:12	"	X	X	X							
TDD-1-20	"	"	1	" ~~8:31~~ 8:18	"									X	
TDD-1-25	"	"	1	" 8:31	"	X	X	X							

Relinquished By:	Date/Time:	Received by:	Date/Time:
[signature]	6/27/97 600P	[signature]	6/27/97 600P
[signature]	6/30/97 1235	[signature]	6/30/97 12:35
[signature]	6 30 97 1605	Received in Lab by: [signature]	6/30/97 4:05 pm

Turnaround Time: (check)
same day ___ 72 hours ___
24 hours ___ 5 days ✓
48 hours ___ normal ___

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: Sample(s) will be disposed of after 30 days.

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 21, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/CA DHS Mod. 8015/8020	Extracted: Jul 30, 1997
Attention: Erin O'Connell	First Sample #:	V7071262	Analyzed: Jul 30, 1997
			Reported: Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071262	TDD-1-40	7.1	0.44	0.89	0.084	0.58
V7071263	TDD-1-50	8.2	0.85	1.6	0.12	0.76
Reporting Limit:		**6.0**	**0.030**	**0.030**	**0.030**	**0.090**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 6.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 21, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/CA DHS Mod. 8015/8020	Extracted: Jul 29, 1997
Attention: Erin O'Connell	First Sample #:	V7071264	Analyzed: Jul 29, 1997
			Reported: Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071264	TDD-2-25	N.D.	0.14	0.13	0.025	0.16
Reporting Limit:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.015**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

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Project Manager

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Pacific Environmental Group	Client Project ID: Thrifty Work Auth. #9615-97-01	Sampled:	Jul 21, 1997
650 Sierra Madre Villa, Ste. 204	213, Malibu	Received:	Jul 24, 1997
Pasadena, CA 91107	Analysis Method: EPA 5030/CA DHS Mod. 8015/8020	Extracted:	Jul 29, 1997
Attention: Erin O'Connell	First Sample #: V7071265	Analyzed:	Jul 29, 1997
		Reported:	Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071265	TDD-2-30	150	0.61	5.3	2.3	17
Reporting Limit:		**50**	**0.25**	**0.25**	**0.25**	**0.75**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 50.

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: V7071266

Sampled: Jul 21, 1997
Received: Jul 24, 1997
Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071266	TDD-3-25	95	1.5	6.1	1.1	8.3
Reporting Limit:		**60**	**0.30**	**0.30**	**0.30**	**0.90**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 60.

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Pacific Environmental Group	Client Project ID: Thrifty Work Auth. #9615-97-01	Sampled:	Jul 21, 1997
650 Sierra Madre Villa, Ste. 204	213, Malibu	Received:	Jul 24, 1997
Pasadena, CA 91107	Analysis Method: EPA 5030/CA DHS Mod. 8015/8020	Extracted:	Jul 29, 1997
Attention: Erin O'Connell	First Sample #: V7071267	Analyzed:	Jul 29, 1997
		Reported:	Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071267	TDD-3-40	29	0.53	1.7	0.50	4.6
Reporting Limit:		**4.0**	**0.020**	**0.020**	**0.020**	**0.060**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 4.

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: V7071268

Sampled: Jul 22, 1997
Received: Jul 24, 1997
Extracted: Jul 28-31, 1997
Analyzed: Jul 28-31, 1997
Reported: Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071268	TDD-4-35	N.D.	N.D.	N.D.	N.D.	N.D.
V7071269	TDD-4-50	N.D.	N.D.	N.D.	N.D.	N.D.
V7071270	TDD-4-85	N.D.	N.D.	N.D.	N.D.	N.D.
V7071271	TDD-5-25	N.D.	N.D.	N.D.	N.D.	N.D.
V7071272	TDD-5-40	N.D.	N.D.	N.D.	N.D.	N.D.

Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
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Pacific Environmental Group	Client Project ID: Thrifty Work Auth. #9615-97-01	Sampled:	Jul 23, 1997
650 Sierra Madre Villa, Ste. 204	213, Malibu	Received:	Jul 24, 1997
Pasadena, CA 91107	Analysis Method: EPA 5030/CA DHS Mod. 8015/8020	Extracted:	Jul 29, 1997
Attention: Erin O'Connell	First Sample #: V7071273	Analyzed:	Jul 29, 1997
		Reported:	Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
V7071273	TDD-6-30	N.D.	0.023	0.045	0.0057	0.034
V7071274	TDD-6-40	N.D.	0.057	0.10	0.010	0.052
Reporting Limit:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.015**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID: Thrifty Work Auth. #9615-97-01	Sampled: Jul 21, 1997
650 Sierra Madre Villa, Ste. 204	213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method: EPA 5030/8020	Extracted: Jul 29, 1997
Attention: Erin O'Connell	First Sample #: V7071262	Analyzed: Jul 29, 1997
		Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
V7071262	TDD-1-40	N.D.
V7071263	TDD-1-50	N.D.
V7071264	TDD-2-25	1.9

Reporting Limit:	**0.050**

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01 213, Malibu	Sampled: Jul 21, 1997
650 Sierra Madre Villa, Ste. 204			Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/8020	Extracted: Jul 29, 1997
Attention: Erin O'Connell	First Sample #:	V7071265	Analyzed: Jul 29, 1997
			Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
V7071265	TDD-2-30	N.D.

Reporting Limit:	2.5

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 50.

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 21, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/8020	Extracted: Jul 29, 1997
Attention: Erin O'Connell	First Sample #:	V7071266	Analyzed: Jul 29, 1997
			Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
V7071266	TDD-3-25	N.D.

Reporting Limit:	3.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 60.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

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Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01 213, Malibu
Analysis Method: EPA 5030/8020
First Sample #: V7071267

Sampled: Jul 21, 1997
Received: Jul 24, 1997
Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
V7071267	TDD-3-40	0.65

Reporting Limit:	0.20

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 4.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/8020	Extracted: Jul 28-31, 1997
Attention: Erin O'Connell	First Sample #:	V7071268	Analyzed: Jul 28-31, 1997
			Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
V7071268	TDD-4-35	N.D.
V7071269	TDD-4-50	N.D.
V7071270	TDD-4-85	N.D.
V7071271	TDD-5-25	N.D.
V7071272	TDD-5-40	N.D.

Reporting Limit:	**0.050**

MTBE = Methyl tert-Butyl Ether
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 23, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/8020	Extracted: Jul 29, 1997
Attention: Erin O'Connell	First Sample #:	V7071273	Analyzed: Jul 29, 1997
			Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
V7071273	TDD-6-30	N.D.
V7071274	TDD-6-40	N.D.

Reporting Limit:	**0.050**

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 21, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 3550/CA DHS Mod. 8015	Extracted: Jul 25, 1997
Attention: Erin O'Connell	First Sample #:	V7071262	Analyzed: Jul 28, 1997
			Reported: Aug 1, 1997

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description Soil	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
V7071262	TDD-1-40	N.D.	N.A.
V7071263	TDD-1-50	5.7	C8-C32
V7071264	TDD-2-25	N.D.	N.A.
V7071265	TDD-2-30	81	C8-C32
V7071266	TDD-3-25	26	C8-C32
V7071267	TDD-3-40	46	C8-C32

Reporting Limit:	**5.0**

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 3550/CA DHS Mod. 8015	Extracted: Jul 28, 1997
Attention: Erin O'Connell	First Sample #:	V7071268	Analyzed: Jul 29-30, 1997
			Reported: Aug 1, 1997

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description Soil	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
V7071268	TDD-4-35	N.D.	N.A.
V7071269	TDD-4-50	N.D.	N.A.
V7071271	TDD-5-25	N.D.	N.A.
V7071272	TDD-5-40	N.D.	N.A.

Reporting Limit:	**5.0**

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

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DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 3550/CA DHS Mod. 8015	Extracted: Jul 28, 1997
Attention: Erin O'Connell	First Sample #:	V7071270	Analyzed: Jul 29-30, 1997
			Reported: Aug 1, 1997

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description Soil	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
V7071270	TDD-4-85	42	C8-C37

Reporting Limit:	**10**

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 2.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 23, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Analysis Method:	EPA 3550/CA DHS Mod. 8015	Extracted: Jul 25, 1997
Attention: Erin O'Connell	First Sample #:	V7071273	Analyzed: Jul 28, 1997
			Reported: Aug 1, 1997

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description Soil	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
V7071273	TDD-6-30	N.D.	N.A.
V7071274	TDD-6-40	N.D.	N.A.

Reporting Limit:	**5.0**

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Analytes reported as N.D. were not present at or above the reporting limit.

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DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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'acific Environmental Group
650 Sierra Madre Villa, Ste. 204
'asadena, CA 91107
ttention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Sample Descript: Soil, TDD-4-35
Lab Number: V7071268

Sampled: Jul 22, 1997
Received: Jul 24, 1997
Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Ethylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	Hexachlorobutadiene	5.0	N.D.
Bromochloromethane	5.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromoform	5.0	N.D.	Methylene chloride	20	N.D.
Bromomethane	5.0	N.D.	Naphthalene	5.0	N.D.
n-Butylbenzene	5.0	N.D.	n-Propylbenzene	2.0	N.D.
sec-Butylbenzene	5.0	N.D.	Styrene	2.0	N.D.
ert-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
Carbon tetrachloride	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
Chlorobenzene	2.0	N.D.	Tetrachloroethene	2.0	N.D.
Chloroethane	5.0	N.D.	Toluene	2.0	N.D.
Chloroform	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloromethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
2-Chlorotoluene	5.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.	Trichloroethene	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
Dibromomethane	2.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
Dichlorodifluoromethane	5.0	N.D.	m,p-Xylenes	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
cis-1,3-Dichloropropene	2.0	N.D.			
trans-1,3-Dichloropropene	2.0	N.D.			

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	101%
Toluene-d8 (81-117)	98%
4-Bromofluorobenzene (74-121)	82%

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Sample Descript:	Soil, TDD-4-85	Extracted: Jul 30, 1997
Attention: Erin O'Connell	Lab Number:	V7071270	Analyzed: Jul 30, 1997
			Reported: Aug 1, 1997

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Ethylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	Hexachlorobutadiene	5.0	N.D.
Bromochloromethane	5.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromoform	5.0	N.D.	Methylene chloride	20	N.D.
Bromomethane	5.0	N.D.	Naphthalene	5.0	N.D.
n-Butylbenzene	5.0	N.D.	n-Propylbenzene	2.0	N.D.
sec-Butylbenzene	5.0	N.D.	Styrene	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
Carbon tetrachloride	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
Chlorobenzene	2.0	N.D.	Tetrachloroethene	2.0	N.D.
Chloroethane	5.0	N.D.	Toluene	2.0	N.D.
Chloroform	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloromethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
2-Chlorotoluene	5.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.	Trichloroethene	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
Dibromomethane	2.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
Dichlorodifluoromethane	5.0	N.D.	m,p-Xylenes	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
cis-1,3-Dichloropropene	2.0	N.D.			
trans-1,3-Dichloropropene	2.0	N.D.			

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.
*Low recovery was due to matrix interference which was confirmed.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	102%
Toluene-d8 (81-117)	86%
4-Bromofluorobenzene (74-121)	*67%

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Sample Descript:	Soil, TDD-5-25	Extracted: Jul 30, 1997
Attention: Erin O'Connell	Lab Number:	V7071271	Analyzed: Jul 30, 1997
			Reported: Aug 1, 1997

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Ethylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	Hexachlorobutadiene	5.0	N.D.
Bromochloromethane	5.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromoform	5.0	N.D.	Methylene chloride	20	N.D.
Bromomethane	5.0	N.D.	Naphthalene	5.0	N.D.
n-Butylbenzene	5.0	N.D.	n-Propylbenzene	2.0	N.D.
sec-Butylbenzene	5.0	N.D.	Styrene	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
Carbon tetrachloride	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
Chlorobenzene	2.0	N.D.	Tetrachloroethene	2.0	N.D.
Chloroethane	5.0	N.D.	Toluene	2.0	N.D.
Chloroform	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloromethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
2-Chlorotoluene	5.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.	Trichloroethene	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
Dibromomethane	2.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
Dichlorodifluoromethane	5.0	N.D.	m,p-Xylenes	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
cis-1,3-Dichloropropene	2.0	N.D.			
trans-1,3-Dichloropropene	2.0	N.D.			

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	102%
Toluene-d8 (81-117)	95%
4-Bromofluorobenzene (74-121)	82%

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Pacific Environmental Group	Client Project ID: Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204	213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Sample Descript: Soil, TDD-5-40	Extracted: Jul 29, 1997
Attention: Erin O'Connell	Lab Number: V7071272	Analyzed: Jul 29, 1997
		Reported: Aug 1, 1997

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Ethylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	Hexachlorobutadiene	5.0	N.D.
Bromochloromethane	5.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromoform	5.0	N.D.	Methylene chloride	20	N.D.
Bromomethane	5.0	N.D.	Naphthalene	5.0	N.D.
n-Butylbenzene	5.0	N.D.	n-Propylbenzene	2.0	N.D.
sec-Butylbenzene	5.0	N.D.	Styrene	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
Carbon tetrachloride	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
Chlorobenzene	2.0	N.D.	Tetrachloroethene	2.0	N.D.
Chloroethane	5.0	N.D.	Toluene	2.0	N.D.
Chloroform	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloromethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
2-Chlorotoluene	5.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.	Trichloroethene	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
Dibromomethane	2.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	**1,3,5-Trimethylbenzene**	**2.0**	**2.5**
1,3-Dichlorobenzene	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
Dichlorodifluoromethane	5.0	N.D.	m,p-Xylenes	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
cis-1,3-Dichloropropene	2.0	N.D.			
trans-1,3-Dichloropropene	2.0	N.D.			

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	103%
Toluene-d8 (81-117)	97%
4-Bromofluorobenzene (74-121)	79%

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Analysis Method: EPA 418.1 (I.R. with clean-up)
First Sample #: V7071268

Sampled: Jul 22, 1997
Received: Jul 24, 1997
Extracted: Jul 30, 1997
Analyzed: Jul 30, 1997
Reported: Aug 1, 1997

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Laboratory Number	Sample Description Soil	Petroleum Hydrocarbons mg/Kg (ppm)
V7071268	TDD-4-35	27
V7071269	TDD-4-50	8.6
V7071270	TDD-4-85	22
V7071271	TDD-5-25	23
V7071272	TDD-5-40	21

Reporting Limit:	5.0

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Sample Descript: Soil, TDD-4-35
Lab Number: V7071268

Sampled: Jul 22, 1997
Received: Jul 24, 1997
Extracted: Jul 28, 1997
Analyzed: Jul 28-30, 1997
Reported: Aug 1, 1997

CALIFORNIA CODE OF REGULATIONS, TITLE 22 METALS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Antimony	6010	15	500	10	.....	N.D.
Arsenic	6010	5.0	500	2.0	.....	N.D.
Barium	6010	100	10000	1.0	.....	170
Beryllium	6010	0.75	75	0.50	.....	N.D.
Cadmium	6010	1.0	100	0.50	.....	1.8
Chromium, VI	7196	5.0	500	0.50	.....	N.D.
Chromium, total	6010	5.0	2500	1.0	.....	45
Cobalt	6010	80	8000	1.0	.....	10
Copper	6010	25	2500	1.0	.....	40
Lead	6010	5.0	1000	2.0	.....	4.7
Mercury	7471	0.20	20	0.020	.....	0.067
Molybdenum	6010	350	3500	1.0	.....	N.D.
Nickel	6010	20	2000	1.0	.....	120
Selenium	6010	1.0	100	2.0	.....	N.D.
Silver	6010	5.0	500	1.0	.....	N.D.
Thallium	6010	7.0	700	10	.....	N.D.
Vanadium	6010	24	2400	1.0	.....	31
Zinc	6010	250	5000	1.0	.....	110

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Sample Descript: Soil, TDD-4-50
Lab Number: V7071269

Sampled: Jul 22, 1997
Received: Jul 24, 1997
Extracted: Jul 28, 1997
Analyzed: Jul 28-30, 1997
Reported: Aug 1, 1997

CALIFORNIA CODE OF REGULATIONS, TITLE 22 METALS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Antimony	6010	15	500	10	.....	N.D.
Arsenic	6010	5.0	500	2.0	.....	5.8
Barium	6010	100	10000	1.0	.....	130
Beryllium	6010	0.75	75	0.50	.....	N.D.
Cadmium	6010	1.0	100	0.50	.....	1.7
Chromium, VI	7196	5.0	500	0.50	.....	N.D.
Chromium, total	6010	5.0	2500	1.0	.....	58
Cobalt	6010	80	8000	1.0	.....	10
Copper	6010	25	2500	1.0	.....	44
Lead	6010	5.0	1000	2.0	.....	4.5
Mercury	7471	0.20	20	0.020	.....	0.060
Molybdenum	6010	350	3500	1.0	.....	2.3
Nickel	6010	20	2000	1.0	.....	83
Selenium	6010	1.0	100	2.0	.....	N.D.
Silver	6010	5.0	500	1.0	.....	N.D.
Thallium	6010	7.0	700	10	.....	N.D.
Vanadium	6010	24	2400	1.0	.....	52
Zinc	6010	250	5000	1.0	.....	110

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID: Thrifty Work Auth. #9615-97-01	Sampled:	Jul 22, 1997
650 Sierra Madre Villa, Ste. 204	213, Malibu	Received:	Jul 24, 1997
Pasadena, CA 91107	Sample Descript: Soil, TDD-4-85	Extracted:	Jul 28, 1997
Attention: Erin O'Connell	Lab Number: V7071270	Analyzed:	Jul 28-30, 1997
		Reported:	Aug 1, 1997

CALIFORNIA CODE OF REGULATIONS, TITLE 22 METALS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Antimony	6010	15	500	10		N.D.
Arsenic	6010	5.0	500	2.0		4.4
Barium	6010	100	10000	1.0		140
Beryllium	6010	0.75	75	0.50		N.D.
Cadmium	6010	1.0	100	0.50		8.3
Chromium, VI	7196	5.0	500	0.50		N.D.
Chromium, total	6010	5.0	2500	1.0		68
Cobalt	6010	80	8000	1.0		5.0
Copper	6010	25	2500	1.0		46
Lead	6010	5.0	1000	2.0		3.1
Mercury	7471	0.20	20	0.020		N.D.
Molybdenum	6010	350	3500	1.0		26
Nickel	6010	20	2000	1.0		80
Selenium	6010	1.0	100	2.0		2.1
Silver	6010	5.0	500	1.0		N.D.
Thallium	6010	7.0	700	10		N.D.
Vanadium	6010	24	2400	1.0		160
Zinc	6010	250	5000	1.0		110

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 22, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 24, 1997
Pasadena, CA 91107	Sample Descript:	Soil, TDD-5-25	Extracted: Jul 28, 1997
Attention: Erin O'Connell	Lab Number:	V7071271	Analyzed: Jul 28-30, 1997
			Reported: Aug 1, 1997

CALIFORNIA CODE OF REGULATIONS, TITLE 22 METALS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Antimony	6010	15	500	10		N.D.
Arsenic	6010	5.0	500	2.0		N.D.
Barium	6010	100	10000	1.0		200
Beryllium	6010	0.75	75	0.50		N.D.
Cadmium	6010	1.0	100	0.50		2.3
Chromium, VI	7196	5.0	500	0.50		N.D.
Chromium, total	6010	5.0	2500	1.0		38
Cobalt	6010	80	8000	1.0		4.9
Copper	6010	25	2500	1.0		27
Lead	6010	5.0	1000	2.0		4.8
Mercury	7471	0.20	20	0.020		0.040
Molybdenum	6010	350	3500	1.0		2.4
Nickel	6010	20	2000	1.0		43
Selenium	6010	1.0	100	2.0		N.D.
Silver	6010	5.0	500	1.0		N.D.
Thallium	6010	7.0	700	10		N.D.
Vanadium	6010	24	2400	1.0		43
Zinc	6010	250	5000	1.0		65

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Client Project ID: Thrifty Work Auth. #9615-97-01
213, Malibu
Sample Descript: Soil, TDD-5-40
Lab Number: V7071272

Sampled: Jul 22, 1997
Received: Jul 24, 1997
Extracted: Jul 28, 1997
Analyzed: Jul 28-30, 1997
Reported: Aug 1, 1997

CALIFORNIA CODE OF REGULATIONS, TITLE 22 METALS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Antimony	6010	15	500	10	.....	N.D.
Arsenic	6010	5.0	500	2.0	.....	N.D.
Barium	6010	100	10000	1.0	.....	220
Beryllium	6010	0.75	75	0.50	.....	N.D.
Cadmium	6010	1.0	100	0.50	.....	2.4
Chromium, VI	7196	5.0	500	0.50	.....	N.D.
Chromium, total	6010	5.0	2500	1.0	.....	61
Cobalt	6010	80	8000	1.0	.....	4.7
Copper	6010	25	2500	1.0	.....	38
Lead	6010	5.0	1000	2.0	.....	3.3
Mercury	7471	0.20	20	0.020	.....	0.054
Molybdenum	6010	350	3500	1.0	.....	1.3
Nickel	6010	20	2000	1.0	.....	66
Selenium	6010	1.0	100	2.0	.....	N.D.
Silver	6010	5.0	500	1.0	.....	N.D.
Thallium	6010	7.0	700	10	.....	N.D.
Vanadium	6010	24	2400	1.0	.....	55
Zinc	6010	250	5000	1.0	.....	98

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997
Matrix: Soil

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
Method Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limit:	**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.015**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 28-31, 1997
Analyzed: Jul 28-31, 1997
Reported: Aug 1, 1997
Matrix: Soil

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
Method Blank	N.D.	N.D.	N.D.	N.D.	N.D.

Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997
Matrix Soil

MTBE (EPA 8020 MODIFIED)

Laboratory Description	Sample Result mg/Kg (ppm)
Method Blank	N.D.

Reporting Limit:	1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 28-31, 1997
Analyzed: Jul 28-31, 1997
Reported: Aug 1, 1997
Matrix Soil

MTBE (EPA 8020 MODIFIED)

Laboratory Description	Sample Result mg/Kg (ppm)
Method Blank	N.D.

Reporting Limit:	1.0

MTBE = Methyl tert-Butyl Ether
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 25, 1997
Analyzed: Jul 28, 1997
Reported: Aug 1, 1997
Matrix Soil

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Description	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
Method Blank	N.D.	N.A.

Reporting Limit:	5.0

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Analytes reported as N.D. were not present at or above the reporting limit.

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DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 28, 1997
Analyzed: Jul 29-30, 1997
Reported: Aug 1, 1997
Matrix Soil

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Description	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
Method Blank	N.D.	N.A.

Reporting Limit:	5.0

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.
This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

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DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997
Matrix Soil

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Ethylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	Hexachlorobutadiene	5.0	N.D.
Bromochloromethane	5.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromoform	5.0	N.D.	Methylene chloride	20	N.D.
Bromomethane	5.0	N.D.	Naphthalene	5.0	N.D.
n-Butylbenzene	5.0	N.D.	n-Propylbenzene	2.0	N.D.
sec-Butylbenzene	5.0	N.D.	Styrene	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
Carbon tetrachloride	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
Chlorobenzene	2.0	N.D.	Tetrachloroethene	2.0	N.D.
Chloroethane	5.0	N.D.	Toluene	2.0	N.D.
Chloroform	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloromethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
2-Chlorotoluene	5.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.	Trichloroethene	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
Dibromomethane	2.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
Dichlorodifluoromethane	5.0	N.D.	m,p-Xylenes	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
cis-1,3-Dichloropropene	2.0	N.D.			
trans-1,3-Dichloropropene	2.0	N.D.			

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	99%
Toluene-d8 (81-117)	99%
4-Bromofluorobenzene (74-121)	84%

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 30, 1997
Analyzed: Jul 30, 1997
Reported: Aug 1, 1997
Matrix Soil

VOLATILE ORGANICS by GC/MS (EPA 8260)

Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)	Analyte	Reporting Limit µg/Kg (ppb)	Sample Result µg/Kg (ppb)
Benzene	2.0	N.D.	Ethylbenzene	2.0	N.D.
Bromobenzene	5.0	N.D.	Hexachlorobutadiene	5.0	N.D.
Bromochloromethane	5.0	N.D.	Isopropylbenzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.	p-Isopropyltoluene	2.0	N.D.
Bromoform	5.0	N.D.	Methylene chloride	20	N.D.
Bromomethane	5.0	N.D.	Naphthalene	5.0	N.D.
n-Butylbenzene	5.0	N.D.	n-Propylbenzene	2.0	N.D.
sec-Butylbenzene	5.0	N.D.	Styrene	2.0	N.D.
tert-Butylbenzene	5.0	N.D.	1,1,1,2-Tetrachloroethane	5.0	N.D.
Carbon tetrachloride	5.0	N.D.	1,1,2,2-Tetrachloroethane	2.0	N.D.
Chlorobenzene	2.0	N.D.	Tetrachloroethene	2.0	N.D.
Chloroethane	5.0	N.D.	Toluene	2.0	N.D.
Chloroform	2.0	N.D.	1,2,3-Trichlorobenzene	5.0	N.D.
Chloromethane	5.0	N.D.	1,2,4-Trichlorobenzene	5.0	N.D.
2-Chlorotoluene	5.0	N.D.	1,1,1-Trichloroethane	2.0	N.D.
4-Chlorotoluene	5.0	N.D.	1,1,2-Trichloroethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.	Trichloroethene	2.0	N.D.
1,2-Dibromo-3-chloropropane	5.0	N.D.	Trichlorofluoromethane	5.0	N.D.
1,2-Dibromoethane	2.0	N.D.	1,2,3-Trichloropropane	10	N.D.
Dibromomethane	2.0	N.D.	1,2,4-Trimethylbenzene	2.0	N.D.
1,2-Dichlorobenzene	2.0	N.D.	1,3,5-Trimethylbenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.	Vinyl chloride	5.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.	o-Xylene	2.0	N.D.
Dichlorodifluoromethane	5.0	N.D.	m,p-Xylenes	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.			
1,2-Dichloroethane	2.0	N.D.			
1,1-Dichloroethene	5.0	N.D.			
cis-1,2-Dichloroethene	2.0	N.D.			
trans-1,2-Dichloroethene	2.0	N.D.			
1,2-Dichloropropane	2.0	N.D.			
1,3-Dichloropropane	2.0	N.D.			
2,2-Dichloropropane	2.0	N.D.			
1,1-Dichloropropene	2.0	N.D.			
cis-1,3-Dichloropropene	2.0	N.D.			
trans-1,3-Dichloropropene	2.0	N.D.			

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
Dibromofluoromethane (80-120)	99%
Toluene-d8 (81-117)	101%
4-Bromofluorobenzene (74-121)	90%

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 30, 1997
Analyzed: Jul 30, 1997
Reported: Aug 1, 1997
Matrix: Soil

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Laboratory Description	Petroleum Hydrocarbons mg/Kg (ppm)
Method Blank	N.D.

Reporting Limit:	5.0

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

Mary Ann Linsel
Project Manager

Celebrating 10 years of service 1987-1997

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 28, 1997
Analyzed: Jul 28-30, 1997
Reported: Aug 1, 1997
Matrix Soil

CALIFORNIA CODE OF REGULATIONS, TITLE 22 METALS

Analyte	EPA Method	STLC Max. Limit mg/L (ppm)	TTLC Max. Limit mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)		TTLC Sample Result mg/Kg (ppm)
Antimony	6010	15	500	10	.....	N.D.
Arsenic	6010	5.0	500	2.0	.....	N.D.
Barium	6010	100	10000	1.0	.....	N.D.
Beryllium	6010	0.75	75	0.50	.....	N.D.
Cadmium	6010	1.0	100	0.50	.....	N.D.
Chromium, VI	7196	5.0	500	0.50	.....	N.D.
Chromium, total	6010	5.0	2500	1.0	.....	N.D.
Cobalt	6010	80	8000	1.0	.....	N.D.
Copper	6010	25	2500	1.0	.....	N.D.
Lead	6010	5.0	1000	2.0	.....	N.D.
Mercury	7471	0.20	20	0.020	.....	N.D.
Molybdenum	6010	350	3500	1.0	.....	N.D.
Nickel	6010	20	2000	1.0	.....	N.D.
Selenium	6010	1.0	100	2.0	.....	N.D.
Silver	6010	5.0	500	1.0	.....	N.D.
Thallium	6010	7.0	700	10	.....	N.D.
Vanadium	6010	24	2400	1.0	.....	N.D.
Zinc	6010	250	5000	1.0	.....	N.D.

This analysis was subcontracted to and performed by Del Mar Analytical, Irvine - ELAP #1197.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL, VAN NUYS (ELAP #1855)

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MS/MSD DATA REPORT

EPA METHOD: **8015 Diesel**
Matrix: Soil

DATE: 7/28/97

SAMPLE #: V7071262

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbons	0	200	200	210	100%	105%	4.9%	103%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

METHOD: **Metals**
Instrument: ICP
Matrix: SOIL

Date: 7/30/97

Sample #: GG04812

Analyte	R1	SP	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppb	ppb	ppb	ppb	%	%	%	%
Antimony	15	500	490	497	95%	96%	1.4%	96%
Arsenic	12	500	522	526	102%	103%	0.76%	102%
Barium	511	500	966	849	91%	68%	13%	79%
Beryllium	0	500	506	507	101%	101%	0.20%	101%
Cadmium	0	500	466	471	93%	94%	1.1%	94%
Chromium	44	500	530	535	97%	98%	0.94%	98%
Cobalt	25	500	498	503	95%	96%	1.0%	95%
Copper	62	500	541	547	96%	97%	1.1%	96%
Lead	88	500	559	566	94%	96%	1.2%	95%
Molybdenum	0	500	495	502	99%	100%	1.4%	100%
Nickel	88	500	518	522	86%	87%	0.77%	86%
Selenium	0	500	458	463	92%	93%	1.1%	92%
Silver	0	250	241	179	96%	72%	30%	84%
Thallium	0	500	480	482	96%	96%	0.42%	96%
Vanadium	114	500	600	607	97%	99%	1.2%	98%
Zinc	212	500	666	672	91%	92%	0.90%	91%

R1..... Result of Sample Analysis
Sp..... Spike Concentration Added to Sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA METHOD: **7471**
Matrix: Soil

DATE: 7/28/97

SAMPLE #: GG04193

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppb	ppb	ppb	ppb	%	%	%	%
Mercury	0.89	8.0	8.1	8.1	90%	90%	0.0%	90%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA METHOD: **3060/7196**
Matrix: Soil

DATE: 7/28/97

SAMPLE #: GG04190

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Chromium (VI)	0	0.30	0.31	0.32	103%	107%	3.2%	105%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA METHOD: **418.1**
Matrix: Soil

DATE: 7/30/97

SAMPLE #: GG04388

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbon	22	60	80	77	97%	92%	3.8%	94%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA METHOD: **8015 by extraction**
Matrix: Soil

DATE: 7/28/97

SAMPLE #: GG04020

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbons	1.7	50	36	34	69%	65%	5.7%	67%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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QC DATA REPORT

EPA METHOD: 8015/8020
matrix: soil

DATE: 7/28/97

SAMPLE # GG04033

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
TPH	0.0024	1.1	1.2	1.1	106%	99%	6.7%	103%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

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QC DATA REPORT

EPA METHOD: 8015/8020
matrix: soil

DATE: 7/28/97

SAMPLE # GG04033

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Benzene	0	0.10	0.099	0.095	99%	95%	3.6%	97%
Toluene	0.00054	0.10	0.097	0.093	96%	93%	3.9%	94%
Ethylbenzene	0	0.10	0.097	0.093	97%	93%	4.1%	95%
Xylenes	0	0.30	0.30	0.29	101%	96%	4.3%	99%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

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MS/MSD DATA REPORT

EPA METHOD: 8260
Matrix: Soil

DATE: 7/29/97

SAMPLE #: GG04386

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppb	ppb	ppb	ppb	%	%	%	%
Benzene	0.50	50	56	58	111%	115%	3.5%	113%
Chlorobenzene	0	50	53	56	106%	112%	5.5%	109%
1,1-Dichloroethane	0	50	56	58	112%	116%	3.5%	114%
1,2-Dichloroethane	0	50	52	52	104%	104%	0.0%	104%
1,1-Dichloroethene	0	50	54	55	108%	110%	1.8%	109%
Chloroform	0.20	50	53	54	106%	108%	1.9%	107%
Tetrachloroethene	0	50	51	54	102%	108%	5.7%	105%
Toluene	1.0	50	51	53	100%	104%	3.8%	102%
Trichloroethene	0	50	51	53	102%	106%	3.8%	104%
Vinyl Chloride	0.30	50	76	79	151%	157%	3.9%	154%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

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LCS DATA REPORT

METHOD 6010
Matrix: Soil

DATE: 7/30/97

Analyte	St	R1	PR
	ppb	ppb	%
Barium	1000	979	98%
Silver	1000	1063	106%

Definitions of Terms:

St..... Standard Concentration

R1..... Standard Result

PR..... Percent Recovery of R1; (R1 / St) x 100

Del Mar Analytical

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2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
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MS/MSD DATA REPORT

EPA Method 8015/8020

Matrix: Soil

Date: 07/29/97

Sample #: V7071289

Batch #: GG29G21S

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR	Acceptance Limits	
	ppm	ppm	ppm	ppm	%	%	%	%	RPD	Mean PR
TPH	0.033	1.0	1.0	1.1	101	107	5.5	104	≤30	85 - 120
Benzene	0.00021	0.10	0.10	0.10	100	104	3.7	102	≤10	85 - 124
Toluene	0.0011	0.10	0.099	0.10	98	102	3.6	100	≤16	85 - 118
Ethylbenzene	0.00036	0.10	0.10	0.11	102	106	4.4	104	≤25	85 - 122
Xylenes	0.0027	0.30	0.31	0.32	101	106	5.0	104	≤19	85 - 120

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits ..... Determined by in-house Control Charts

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LCS DATA REPORT

METHOD 8260
Matrix: Soil

DATE: 7/29/97

Analyte	St	R1	PR
	ng	ng	%
Vinyl Chloride	50	80	160%
1,1-Dichloroethene	50	57	114%
Chloroform	50	52	104%
Benzene	50	54	108%
1,2-Dichloroethane	50	48	96%
1,2-Dichloropropane	50	54	108%
Trichloroethene	50	53	106%
Toluene	50	50	100%
Tetrachloroethene	50	52	104%
Ethylbenzene	50	52	104%

Definitions of Terms:

St..... Total nanograms of standard added to sample

R1..... Standard Result

PR..... Percent Recovery of R1; (R1 / St) x 100

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CORRECTIVE ACTION REPORT

Department:	GC/MS	Date:	7/29/97
Method:	EPA 8260	Matrix:	Soil

Identification and Definition of Problem:

The recoveries of vinyl chloride in the Matrix Spike/Matrix Spike Duplicate (MS/MSD) were outside of the acceptance limits.

Determination of the Cause of the Problem:

The detector became unstable over time and needed calibration.

Corrective Action:

The GC/MS was calibrated on 7/30/97 with acceptable results. Since the Laboratory Control Sample (LCS) was within acceptance limits, the analytical batch was validated and the results were reported.

Laboratory Manager: _____ Date: 8-7-97

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1/4

9615-97-01

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CHAIN OF CUSTODY FORM

Client Name/Address:	Project/PO Number:
Thrifty Oil Co. 10000 Lakewood Downey, CA	Thrifty #213 29145 Heathercliff Malibu, CA
Project Manager/Phone Number:	**Sampler:**
Erin O'Connell PEG 818-351-4814	Chris Rohlfing PEG # 732-038.19

Sample Description	Sample Matrix	Container Type	#of Cont	Sampling Date/Time	Preservatives	Analysis Required: 8015 TPH-g	8015 TPH-d	8020 BTEX, MTBE						Hold	Quantify MTBE Results — Special Instructions
TDD-1-30	SOIL	LINER	1	7-21-97 10:21	ICE									X	
TDD-1-35	"	"	"	10:29	"									X	
TDD-1-40	"	"	"	10:51	"	X	X	X							
TDD-1-45	"	"	"	11:02	"									X	
TDD-1-50	"	"	"	11:10	"	X	X	X							
TDD-2-5	"	"	"	11:50	"									X	
TDD-2-10	"	"	"	12:02	"									X	
TDD-2-15	"	"	"	12:11	"									X	
TDD-2-20	"	"	"	12:24	"									X	
TDD-2-25	"	"	"	12:38	"	X	X	X							
TDD-2-30	"	"	"	12:44	"	X	X	X							
TDD-3-5	"	"	"	13:20	"									X	
TDD-3-10	"	"	"	13:26	"									X	
TDD-3-15	"	"	"	13:31	"									X	

Relinquished By:	Date /Time:	Received by:	Date /Time:
[signature]	7/24/97 0930	[signature]	7/24/97 0930
[signature]	7/24/97 1030		
		Received in Lab by: [signature]	7-24 1030

Turnaround Time: (check)
same day ____ 72 hours ____
24 hours ____ 5 days ✓
48 hours ____ normal ____

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: Sample(s) will be disposed of after 30 days.

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9615-97-01

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CHAIN OF CUSTODY FORM

Client Name/Address:
Thrifty Oil Co
12000 Lakewood
Downey, CA

Project/PO Number:
Thrifty #213
29145 Heathercliff
Malibu, CA

Project Manager/Phone Number:
Erin O'Connell
PEG
818-351-4814

Sampler:
Chris Rehling
PEG # 732-035.19

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont	Sampling Date/Time	Preservatives	5030/8015 TPHg	5030 TPHd	8020 BTEX, MTBE	8260 VOCs	CAM METALS	418.1 TRPH			H2O	Quantify MTBE Results. Special Instructions
TDD-3-20	SOIL	LINER	1	7-21-97 13:40	ICE									X	
TDD-3-25				13:53		X	X	X							
TDD-3-30				14:00										X	
TDD-3-35				14:08										X	
TDD-3-40				14:15		X	X	X							
TDD-4-5				7-22-97 8:55										X	
TDD-4-10				9:04										X	
TDD-4-15				9:11										X	
TDD-4-20				9:17										X	
TDD-4-25				9:31										X	
TDD-4-30				9:40										X	
TDD-4-35				9:44		X	X	X	X	X	X				
TDD-4-40				9:55										X	
TDD-4-45				10:07										X	

Relinquished By:	Date /Time: 7/24/97 0930	Received by:	Date /Time: 7/24/97 0930
Relinquished By:	Date /Time: 7/24/97 1030	Received by:	Date /Time:
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time: 7-24 10:32

Turnaround Time: (check)
same day ____ 72 hours ____
24 hours ____ 5 days ✓
48 hours ____ normal ____

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: Sample(s) will be disposed of after 30 days

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CHAIN OF CUSTODY FORM

Client Name/Address:	Project/PO Number:
Thrifty Oil Co. 10000 Lakewood Downey, CA	Thrifty #213 29145 Heathercliff Malibu, CA
Project Manager/Phone Number:	**Sampler:**
Erin O'Connell PEG 818-351-4814	Chris Rohlfing PEG # 732-038.1a

Sample Description	Sample Matrix	Container Type	#of Cont	Sampling Date/Time	Preservatives	Analysis Required: 8015M TPHg	8015M TPHd	8020 BTEX, MTBE	8260 VOCs	CAM METALS	418.1 TRPH			HOLD	Quantify MTBE Results — Special Instructions
TDD-4-50	SOIL	LINER	1	7-22-97 10:16	ICE	X	X	X	X	X	X				
TDD-4-55	"	"	"	" 10:27	"									X	
TDD-4-60	"	"	"	" 10:35	"									X	
TDD-4-65	"	"	"	" 10:44	"									X	
TDD-4-70	"	"	"	" 10:55	"									X	
TDD-4-75	"	"	"	" 11:11	"									X	
TDD-4-80	"	"	"	" 11:23	"									X	
TDD-4-85	"	"	"	" 11:35	"	X	X	X	X	X	X				
TDD-5-5	"	"	"	" 14:05	"									X	
TDD-5-10	"	"	"	" 14:13	"									X	
TDD-5-15	"	"	"	" 14:21	"									X	
TDD-5-20	"	"	"	" 14:30	"									X	
TDD-5-25	"	"	"	" 14:42	"	X	X	X	X	X	X				
TDD-5-30	"	"	"	" 14:53	"									X	

Relinquished By:	Date/Time:	Received by:	Date/Time:
[signature]	7/24/97 0930	[signature]	7/24/97 0930
[signature]	7/24/97 1030		
		Received in Lab by: [signature]	Date/Time: 7-24-97 10 30

Turnaround Time: (check)
same day ____ 72 hours ____
24 hours ____ 5 days ✓
48 hours ____ normal ____

Sample Integrity: (Check)
intact ✓ on ice ✓

9615-97-01

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CHAIN OF CUSTODY FORM

Client Name/Address:
Thrifty Oil Co.
10000 Lakewood
Downey, CA

Project/PO Number:
Thrifty #210
29145 Heathercliff
Malibu, CA

Project Manager/Phone Number:
Erin O'Connell
PEC
818-351-4814

Sampler:
Chris Rohlfing
PEC #732-038.1a

Sample Description	Sample Matrix	Container Type	#of Cont	Sampling Date/Time	Preservatives	8015M TPHg	8015M TPHd	8020 BTEX, MTBE	8260 VOCs	CAM METALS	418.1 TRPH			HOLD	Quantify MTBE Results / Special Instructions
TDD-5-35	SOIL	LINER	1	7-22-97 14:59	ICE									X	
TDD-5-40				15:09		X	X	X	X	X	X				
TDD-6-5				7-23-97 8:46										X	
TDD-6-10				8:57										X	
TDD-6-15				9:02										X	
TDD-6-20				9:13										X	
TDD-6-25				9:21										X	
TDD-6-30				9:28		X	X	X							
TDD-6-35				9:36										X	
TDD-6-40				9:45		X	X	X							

Analysis Required

Relinquished By:	Date /Time: 7/24/97 0930	Received by:	Date /Time: 7/24/97 0930
Relinquished By:	Date /Time: 7/24/97 1030	Received by:	Date /Time:
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time: 7-24 10:30

Turnaround Time: (check)
same day ____ 72 hours ____
24 hours ____ 5 days ✓
48 hours ____ normal ____

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: Sample(s) will be disposed of after 30 days

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 25, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 25, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/CA DHS Mod. 8015/8020	Extracted: Jul 30-31, 1997
Attention: Erin O'Connell	First Sample #:	GG04596	Analyzed: Jul 30-31, 1997
			Reported: Aug 1, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl Benzene	Total Xylenes
	Water	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
GG04596	**MW-7**	**1,500**	**74**	**12**	**2.9**	**8.0**
Dilution 1:5	Reporting Limit:	250	1.5	1.5	1.5	3.0
GG04597	**TDD-4**	**N.D.**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution 1:1	Reporting Limit:	50	0.30	0.30	0.30	0.60

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 25, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 25, 1997
Pasadena, CA 91107	Analysis Method:	EPA 5030/8020	Extracted: Jul 30, 1997
Attention: Erin O'Connell	First Sample #:	GG04596	Analyzed: Jul 30, 1997
			Reported: Aug 1, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Water	Sample Result µg/L (ppb)	Reporting Limit µg/L (ppb)	Dilution Factor
GG04596	MW-7	39	10	1
GG04597	TDD-4	N.D.	10	1

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 25, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 25, 1997
Pasadena, CA 91107	Analysis Method:	EPA 3510/CA DHS Mod. 8015	Extracted: Jul 30, 1997
Attention: Erin O'Connell	First Sample #:	GG04596	Analyzed: Jul 31, 1997
			Reported: Aug 1, 1997

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description	Sample Result	Reporting Limit	Dilution Factor	Hydrocarbon Type
	Water	mg/L (ppm)	mg/L (ppm)		
GG04596	MW-7	N.D.	0.50	1	N.A.
GG04597	TDD-4	N.D.	0.50	1	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

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Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 25, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 25, 1997
Pasadena, CA 91107	Analysis Method:	EPA 418.1 (I.R. with clean-up)	Extracted: Jul 31, 1997
Attention: Erin O'Connell	First Sample #:	GG04597	Analyzed: Jul 31, 1997
			Reported: Aug 1, 1997

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Laboratory Number	Sample Description Water	Sample Result mg/L (ppm)	Reporting Limit mg/L (ppm)	Dilution Factor
GG04597	TDD-4	N.D.	1.0	1

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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Pacific Environmental Group	Client Project ID:	Thrifty Work Auth. #9615-97-01	Sampled: Jul 25, 1997
650 Sierra Madre Villa, Ste. 204		213, Malibu	Received: Jul 25, 1997
Pasadena, CA 91107	Sample Descript:	Water, TDD-4	Extracted: Jul 29, 1997
Attention: Erin O'Connell	Lab Number:	GG04597	Analyzed: Jul 29, 1997
			Reported: Aug 1, 1997

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Reporting Limit µg/L (ppb)	Sample Result µg/L (ppb)
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	5.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	5.0	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	2.0	N.D.
Chlorodibromomethane	2.0	N.D.
Chloroethane	5.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	5.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	20	N.D.
4-Methyl-2-pentanone	5.0	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	5.0	N.D.
Total Xylenes	2.0	N.D.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
1,2-Dichloroethane-d4 (76-114)	103%
Toluene-d8 (88-110)	102%
4-Bromofluorobenzene (86-115)	98%

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 30-31, 1997
Analyzed: Jul 30-31, 1997
Reported: Aug 1, 1997
Matrix: Water

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

	Laboratory Description	Volatile Fuel Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Total Xylenes µg/L (ppb)
	Method Blank	**N.D.**	**N.D.**	**N.D.**	**N.D.**	**N.D.**
Dilution 1:1	Reporting Limit:	50	0.30	0.30	0.30	0.60

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12. Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

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Nancy Johnson
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 30, 1997
Analyzed: Jul 31, 1997
Reported: Aug 1, 1997
Matrix: Water

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Sample Description	Sample Result mg/L (ppm)	Reporting Limit mg/L (ppm)	Dilution Factor	Hydrocarbon Type
Method Blank	N.D.	0.50	1	N.A.

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.
Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 31, 1997
Analyzed: Jul 31, 1997
Reported: Aug 1, 1997
Matrix: Water

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Sample Description	Sample Result mg/L (ppm)	Reporting Limit mg/L (ppm)	Dilution Factor
Method Blank	N.D.	1.0	1

Analytes reported as N.D. were not present at or above the reporting limit. Dilution factors are due to matrix effects and other factors.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Erin O'Connell

Method Blank

Extracted: Jul 29, 1997
Analyzed: Jul 29, 1997
Reported: Aug 1, 1997
Matrix: Water

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Reporting Limit µg/L (ppb)	Sample Result µg/L (ppb)
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	5.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	5.0	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	2.0	N.D.
Chlorodibromomethane	2.0	N.D.
Chloroethane	5.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	5.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	2.0	N.D.
trans-1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	20	N.D.
4-Methyl-2-pentanone	5.0	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl acetate	5.0	N.D.
Vinyl chloride	5.0	N.D.
Total Xylenes	2.0	N.D.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

Surrogate Standard Recoveries (Accept. Limits):	
1,2-Dichloroethane-d4 (76-114)	105%
Toluene-d8 (88-110)	104%
4-Bromofluorobenzene (86-115)	96%

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MS/MSD DATA REPORT

EPA METHOD: 624
Matrix: Water

DATE: 7/29/97

SAMPLE #: GG04038

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppb	ppb	ppb	ppb	%	%	%	%
Benzene	0	50	52	51	104%	102%	1.9%	103%
Chlorobenzene	0	50	53	51	106%	102%	3.8%	104%
1,1-Dichloroethane	0	50	51	46	102%	92%	10%	97%
1,2-Dichlororethane	0	50	56	59	112%	118%	5.2%	115%
1,1-Dichloroethene	0	50	49	45	98%	90%	8.5%	94%
Chloroform	0.20	50	53	49	106%	98%	7.8%	102%
Tetrachloroethene	0	50	50	48	100%	96%	4.1%	98%
Toluene	0	50	51	50	102%	100%	2.0%	101%
Trichloroethene	79	50	125	129	92%	100%	3.1%	96%
Vinyl Chloride	0	50	61	55	122%	110%	10%	116%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA METHOD: **418.1**
Matrix: Water

DATE: 7/31/97

SAMPLE #: Blank

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbons	0	5.0	4.8	4.6	96%	92%	4.3%	94%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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MS/MSD DATA REPORT

EPA Method 8015/8020

Matrix: Water

Date: 07/30/97

Sample #: GG04449

Batch #: GG30191W

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	Mean PR		Acceptance Limits	
	ppb	ppb	ppb	ppb	%	%	%	%		RPD	Mean PR
TPH	10	220	212	198	92	85	6.9	89		≤18	81 - 119
Benzene	0	20	17	18	85	89	4.2	87		≤10	83 - 115
Toluene	0	20	16	16	78	82	5.1	80	*	≤10	81 - 115
Ethylbenzene	0	20	15	16	77	81	5.6	79	*	≤10	82 - 115
Xylenes	0	60	46	50	77	83	6.9	80	*	≤10	81 - 115

* Refer to LCS for batch validation.

Definition of Terms

R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; ((MS-R1)/SP) X 100
PR2..... Percent Recovery of MSD; ((MSD-R1)/SP) X 100
RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2) X 100
Mean PR..... Mean Percent Recovery
Acceptance Limits..... Determined by in-house Control Charts

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LCS DATA REPORT

EPA Method 8015/8020

Matrix: Water

Date: 07/30/97

Sample #: BLANK

Batch #: GG30191W

Analyte	Spike Conc.	Result	% Recovery	ACP
TPH	220	230	104	85 - 115 %
Benzene	20	19	95	85 - 115 %
Toluene	20	18	90	85 - 115 %
Ethylbenzene	20	18	92	85 - 115 %
Xylenes	60	56	93	85 - 115 %

Definition of Terms

LCS ..... Laboratory Control Sample
Spike Conc ..... Result of Sample Analysis
Result ..... Result of Laboratory Control Sample Analysis
%Recovery ..... Percent Recovery of LCS; ((Result - Spike Conc.) / Spike Conc.) X 100
ACP ..... Acceptance Limits for Percent Recovery
TPH ..... Total Petroleum Hydrocarbons

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CORRECTIVE ACTION REPORT

Department:	GC	Date:	7/31/97
Method:	EPA mod. 8015 extractable	Matrix:	Water

Identification and Definition of Problem:

The recovery of extractable TPH for the Matrix Spike (MS) and the Laboratory Control Sample (LCS) was below the acceptance limits.

Determination of the Cause of the Problem:

During the extraction procedure, the concentrator was set at the wrong pressure during the solvent concentration for the QC samples. By the time the extraction technician noticed the problem, most of the solvent was concentrated.

Corrective Action:

The technician noticed the incorrect pressure before the water samples were concentrated and corrected the pressure setting. Since the surrogate recoveries for all the water samples were within acceptance limits, the sample results were reported. The Organic Group Leader spoke to all the technicians about monitoring the concentrator pressure more closely in the future. The subsequent batch of QC samples were within acceptance limits.

Laboratory Manager: _____ Date: _____

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MS/MSD DATA REPORT

EPA METHOD: **8015 by extraction**
Matrix Water

DATE: 7/31/97

SAMPLE #: Blank

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbons	0	2.5	1.4	1.8	56%	72%	25%	64%

Definition of Terms:

R1..... Result of Sample Analysis

Sp..... Spike Concentration Added to Sample

MS..... Matrix Spike Result

MSD..... Matrix Spike Duplicate Result

PR1..... Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2..... Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD..... Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

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LABORATORY CONTROL SAMPLE

EPA METHOD: 8015 by extraction

DATE: 7/31/97

Analyte	St	R1	PR
	ppm	ppm	%
Hydrocarbons	2.5	1.4	56%

Definition of Terms:

St ..... **Standard Concentration**

R1 ..... **Standard Result**

PR ..... **Percent Recovery of R1; (R1 / St) X 100**

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CHAIN OF CUSTODY FORM WA # 9615-97-01

Client Name/Address: THRIFTY OIL CO. 10000 LAKEWOOD, CA DOWNEY, CA

Project/PO Number: THRIFTY OIL 29145 HEATHERCLIFF MALIBU, CA 732-030-1A SA 213

Project Manager/Phone Number: ERIN O'CONNELL PACIFIC ENV. GROUP (818) 351-4814

Sampler: PAUL R., + TERRY GURN

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont	Sampling Date/Time	Preservatives	8015M TPH-Gas	8020/BTEX + MTBE	418.1	~~CAM METALS~~ (Cancel via Erin O'Connell NJ 7/28)	8015M DIESEL	~~8260~~ 8240 (see Kat "FD3ED")			Special Instructions
MW-7	W	40 mL VOA	3	7/25/97 0830A	HCL	X	X							QUANTITATIVE RESULTS NO < 50 NU < 100
TDD-4	W	40 mL VOA	~~2~~ 6	7/25/97 0930 Am	HCL	X	X	X						
MW-7	W	Liter Amber	1	7/25/97 0830A	NONE				~~X~~	X				
TDD-4	W	Liter Amber	~~1~~ 2	7/25/97 0930 Am	NONE				X	X	X			

Relinquished By:	Date/Time:	Received by:	Date/Time:
[signature]	7/25/97 1530 PM	[signature]	7-25-97 3:30 pm
[signature]	7-25-97 3:50		
		Received in Lab by: [signature]	7/25/97 3:50 pm

Turnaround Time: (check)
same day ___ 72 hours ___
24 hours ___ 5 days X
48 hours ___ normal ___

Sample Integrity: (Check)
intact ___ on ice ___

Note: Sample(s) will be disposed of after 30 days.

Equipment Decontamination Technique

1.0 Scope and Application

The following section describes field techniques that were performed by Pacific Environmental Group, Inc. PACIFIC personnel in the performance of the tasks involved with this project.

2.0 Equipment and Supplies

Quantity	Description
3	Wash tubs or buckets (5-gallon minimum capacity).
1 gallon	CitranoxÔ detergent.
As needed	Tap water.
As needed	Distilled water.
1 pair	Neoprene gloves.
3	Scrub brushes.

3.0 Procedures

3.1 Rinse each bucket (or wash tub) with tap water and then distilled water, prior to use.

3.2 Place one brush in each bucket and fill accordingly:

a) Bucket #1: Tap water/CitranoxÔ detergent (mix as specified by the manufacturer).
b) Bucket #2: Tap water.
c) Bucket #3: Distilled water.

3.3 Place the piece of equipment to be washed into bucket #1 and scrub with brush. Rinse the equipment with the contents (tap water and detergent) of bucket #1.

3.4 Remove the piece of equipment from bucket #1 and place in bucket #2 and scrub with brush. Rinse the equipment with the contents (tap water) of bucket #2.

3.5 Remove piece of equipment from bucket #2 and place in bucket #3 and scrub with the brush. Rinse the equipment with the contents (distilled water) of bucket #3.

3.6 Remove the piece of equipment from bucket #3 and place on clean or prepared surface to air dry.

3.7 Repeat Steps 3.3 through 3.6 for each piece of field equipment which requires decontamination.

Note: Periodically replace the contents of each bucket. The frequency at which the contents should be replaced is dependent on site-specific conditions.

Standard Operating Procedure

for

Soil Sampling Techniques

The following section describes field techniques that were performed by Pacific Environmental Group, Inc. PACIFIC personnel in the performance of the tasks involved with this project.

1.0 Locating Underground Utilities

Prior to the commencement of work on site, PACIFIC researched the location of all underground utilities with the assistance of Underground Service Alert (USA - Southern California toll free phone number 1-800-422-4133). USA contacted the owners of the various utilities in the vicinity of the site to have the utility owners mark the locations of their underground utilities. Prior to drilling, each boring was advanced manually using a hand auger and post-hole digger to a minimum depth of 5 feet to avoid contact with underground fuel distribution and/or vent lines and other unmarked utilities.

2.0 Soil Boring and Soil Sampling Protocol

Drilling and soil sampling was performed under the direction of a PACIFIC engineer or geologist. The soil borings were drilled using a truck-mounted drill rig equipped with hollow stem augers.

All down-hole drilling equipment was steam-cleaned prior to use and between each boring to reduce the chances of cross contamination. The split-barrel sampler was washed in soap solution and double rinsed with tap and purified between each sampling event to reduce the potential for cross contamination between samples. Hand augers were washed in soap solution and double rinsed with tap and purified water between each sampling event to reduce the potential for cross contamination between samples during hand auger sampling.

Soil sampling was performed in accordance with American Society for Testing and Materials Method 1586-84. Using this procedure a California-type sampler is driven into the soil every 5 vertical feet by a 140-pound weight falling 30 inches. Three 6-inch brass liners were placed in the sampler for sample collection. The number of blow counts required to advance the sampler 18 inches was recorded at each sample interval onto soil boring logs. The lower-most intact soil sample was retained for chemical analysis. The ends of the brass sleeve were covered with Teflon™ sheets and plastic caps. Each sample was then labeled, identified on the chain of custody, and stored in a chilled cooler for transport to the laboratory. Remaining soil in the sampler was used for later screening with a flame-ionization detector (FID). The soil was field screened by placing the soil in

resealable plastic bags and allowed to reach ambient temperature. Headspace vapors in the bags were field screened with a calibrated FID. The highest observed stable reading was then recorded onto the boring log. Another portion of the soil sample was used for lithologic classification and description by the United Soil Classification System.

2.1 Soil Sample Analytical Selection Procedure

At a minimum, two soil samples from each soil boring were submitted to the laboratory for chemical analysis including the deepest soil sample per boring and the sample with the highest field screening result. Any additional soil samples analyzed were selected based on field observations and were analyzed at the discretion of the regional project manager.

2.2 Soil Sample Analyses

Select soil samples were analyzed by the following Environmental Protection Agency (EPA) test methods:

Sample Location Method(s)	Analytical Parameters	EPA
Near waste-oil, diesel, septic tanks, or clarifiers	Total recoverable petroleum hydrocarbons (TRPH)	418.1
	Volatile Organic Compounds	624/8240
	Title 22 Metals	6010/7196/ 7471
	Total Petroleum Hydrocarbons as diesel (TPHd)	Mod. 8015
	Benzene, toluene, ethylbenzene, xylenes (BTEX)	8020
All other soil samples	Total petroleum hydrocarbons as gasoline (TPHg)	Mod. 8015
	Benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MtBE)	8020 and 8020A

Standard Operating Procedure

for

Installing Groundwater Monitoring Wells

1.0 Scope and Application

Pacific Environmental Group, Inc. PACIFIC has developed the following Standard Operating Procedure (SOP) for installing a groundwater monitoring well. The objective of this SOP is to establish installation guidelines in order to meet the requirements of the Regional Water Quality Control Board.

2.0 Required Equipment and Supplies (supplied by driller)

Quantity	Description
As needed	2-inch PVC casing (blank and slotted).
As needed	Filter pack sand (typically Monterey #3).
As needed	Bentonite pellets.
As needed	Grout (mixture of cement and bentonite).
1 per well	Locking well plug
1 per well	Traffic Rated Well box

3.0 Procedures

The drilling contractor will drill a soil boring to a depth of approximately 11 feet below the water table using a hollow-stem auger drilling rig. Following completion of the borehole, the drilling contractor will begin the installation of the well. The standard well components and specifications of a groundwater monitoring well are presented below.

Well Casing and Screen: The well is constructed of 2-inch diameter schedule 40 polyvinyl chloride (PVC) blank and factory-slotted well casing. Twenty feet of slotted well casing with an end cap will be placed on approximately one foot of filter pack sand. The bottom of the well should be situated ten feet below the water table. The slotted casing is flush threaded with the blank casing which extends the well to the surface. All materials introduced into the borehole must be pre-cleaned.

Filter Pack (Sand): The filter pack will be placed around the slotted casing to a height of approximately 2 feet above the top of the slotted casing interval. The sand in the filter pack should be sized to be compatible with

the formation grain size and slot size selected. The sand typically used is Monterey #3. Care must be taken when introducing the sand around the casing to minimize the potential for bridging.

Bentonite Seal: Bentonite pellets will be placed in the annular space immediately above the filter pack. This seal will have an approximate thickness of 3 feet.

Annular Seal: Grout will be placed in the annular space immediately above the bentonite seal. This grout is typically bentonite.

Well Plug: An expandable, water-tight, locking well plug is placed on the well casing.

Well Box: A traffic-rated, flush-mounted, securable well box will be installed around the top of the well. The well box will be set in concrete to a depth of at least 2 feet below grade. A sanitary seal at the wellhead will be maintained to prevent surface fluids from entering the well.

Standard Operating Procedure

for

Developing Groundwater Monitoring Wells

1.0 Scope and Application

PACIFIC Environmental Consultants, Inc. PACIFIC has developed the following Standard Operating Procedure (SOP) to develop a groundwater monitoring well. The objective of this SOP is to facilitate the optimal connection between groundwater in the formation and in the groundwater monitoring well. Well development is usually conducted immediately following the completion of the well installation.

2.0 Required Equipment and Supplies

Quantity	Description
1	Triple meter (capable of measuring temperature, pH, and specific conductivity).
As needed	Surge block (provided by drilling contractor).
As needed	Purge bailer (provided by drilling contractor).
As needed	55-gallon drums (DOT approved).
As needed	Tools required to remove well box cover (typically a standard socket set). Also appropriate key to unlock well plugs.

3.0 Procedures

Upon completing the installation of a groundwater monitoring well, the drilling contractor will develop the well (with the exceptions noted below). Development of the well involves both surging and bailing. Prior to and between uses, PACIFIC personnel must assure that the drilling contractor is decontaminating any equipment entering the well. The drilling contractor typically uses a high-pressure washer during the decontamination process.

At regular intervals, measure the temperature, pH, and specific conductivity of the purge water using a triple meter. Record the stabilization parameters on a PACIFIC Well Development Data Sheet.

Continue developing the well until one of the two following conditions are met:

(1) Removal of three to five well-casing volumes of purge water and stabilization of the three parameters.

(2) Recharge of the well is not sufficient to sustain the purging process.

Install a well plug and lock on the well and secure the well box lid.

Contain the purge and decontamination water in Department of Transportation (DOT) approved 55-gallon drums. The drums will be temporarily stored on site pending disposal.

Standard Operating Procedures

for

Groundwater Sampling Technique

1.0 Scope and Application

The following section describes field techniques that were performed by Pacific Environmental Group, Inc. PACIFIC personnel in the performance of the tasks involved with this project.

2.0 Required Equipment and Supplies

Quantity	Description
1	Electronic water level indicator.
1	2-inch diameter PVC bailer (reusable)
1 per well	Polyethylene bailer (disposable).
1	Triple meter (capable of measuring temperature, pH, and specific conductivity).
As needed	Twine.
3 per well	Lab-provided sample containers (usually 40-milliliter VOA vials). The number and size of container(s) is dependent on the analyses to be performed.
1	Waterproof marking pen.
1 per sample	Re-sealable plastic bag.
As needed	Chain-of-custody forms.
1	Ice chest with ice or dry ice (no "blue ice").
1	Trip blank (supplied and prepared by the laboratory).
As needed	Tools required to remove well box cover (typically a standard socket set).
As needed	Decontamination supplies: 5 gallon buckets, Citri-Nox soap (or equivalent), scrub brushes, tap water, distilled water.

3.0 Procedures

Prior to using any downhole equipment, decontaminate each piece of equipment using a three bucket wash. The first bucket was comprised of a non-phosphate detergent solution, the second bucket was clean tap water and the third bucket was deionized water.

Depth to groundwater was measured using a water level indicator or interface probe (interface probe was used where liquid phase hydrocarbons were present). The total depth of the well was measured. Based on the measurements and the well diameter, the appropriate volume of groundwater to be purged was calculated.

A PVC bailer was used to purge the calculated volume of groundwater from the well. Throughout the purging process, the groundwater parameters of pH, electrical conductivity and temperature were measured. Bailing continued until at least three casing volumes of groundwater and the groundwater parameters stabilized to within 10% of the previous value(s).

Depth to groundwater was again measured prior to sampling. Groundwater samples were collected when the column of groundwater in the well recharged to at least 80% of its original volume or two hours, which ever came first.

Using dedicated equipment and materials (twine, sampling gloves, and disposable bailer), a groundwater sample was collected from the selected well(s). The sampling time and sample appearance was noted on a PACIFIC Sampling Information Sheet.

The sample was transferred to a laboratory-provided and properly labeled VOA.

Each sample was properly identified on a chain-of-custody.

The sample(s) were placed in re-sealable plastic bags and stored in an ice-cooled chest for transport to the laboratory for chemical analysis.

One laboratory-prepared trip blank accompanied the samples during transportation to the laboratory.

Upon completion of the sampling event, all samples were relinquished to the laboratory for analysis within 24 hours of collection.

activities were contained in Department of Transportation-approved, 55-gallon, steel drums. These drums were appropriately labeled and stored on site pending disposal.