REPORT OF WASTE OIL UST SOIL EXCAVATION AND REMEDIATION AND WORKPLAN FOR SOIL AND GROUND WATER INVESTIGATION

3/30/94

1900 Lewelling Boulevard
San Leandro, California

CWEC 20507-001-01

Prepared for:

Mr. Johnny Lin
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Prepared by:

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March 30, 1994

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ENGINEERING CORPORATION

March 30, 1994

Alameda County UST Local
Oversight Program
80 Swan Way, Suite 200
Oakland, CA 94621

Attention: Mr. Scott Seary

Subject: Report of Waste Oil UST Soil
Excavation and Remediation
1900 Lewelling Boulevard Site
San Leandro, California
CWEC 20507-001-01

Ladies and Gentlemen:

This report, submitted on behalf of Mr. Johnny Lin, documents the overexcavation and remediation of soils associated with a former waste oil underground storage tank (UST) at the subject site. In addition, this report provides additional background information on four former gasoline USTs located at the subject site in the past, and proposes a workplan to conduct a soil and ground water investigation at the site.

As part of the property purchase agreement in late 1985, wherein Mr. Johnny Lin purchased the property from Mr. Henry Edward Pike, four gasoline USTs were removed and the UST pit was overexcavated. Although the soil sampling reports for these activities indicated significant levels of gasoline constituents in subsurface soils, the San Leandro Fire Department apparently granted case closure for these USTs without further investigation.

In 1990, Mr. Lin discovered the existence of one 200-gallon waste oil UST which had not been reported by the previous owner during the property transfer. This UST was removed in October 1990, and a soil sample taken beneath the UST contained elevated levels of gasoline, motor oil, chlorinated hydrocarbons, and semi-volatile organic compounds.

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Century West Engineering was contracted in early 1991 to provide oversight during: (1) Re-excavation and overexcavation of the waste oil UST cavity; (2) Onsite bioremediation of approximately 40 cubic yards of hydrocarbon-laden soil from the waste oil UST overexcavation; and (3) Periodic sampling of the bioremediating soils to assess effectiveness of remediation.

Results of the waste oil UST overexcavation and soil bioremediation indicate that: (1) The re-excavation and overexcavation of the waste oil UST cavity was effective in removing all significant hydrocarbon-laden soil associated with the waste oil UST; and (2) The bioremediation of excavated soils was effective in removing all volatile organic compounds and at least 93% of motor oil-range hydrocarbons. This bioremediated soil is now acceptable for Class II landfill disposal.

Based on the results of these activities, and on background information about the four former gasoline USTs, this report includes a workplan proposing the installation and sampling of five ground water monitoring wells at the site. The purpose of these wells will be to: (1) Investigate soil and ground water quality in a verified downgradient direction from the former waste oil UST; (2) Investigate soil and ground water quality in a verified downgradient direction from the four former gasoline USTs; and (3) Investigate soil and ground water quality on the verified upgradient side of the project site.

We appreciate the opportunity to present this report for your review. Please contact us if you have questions or require additional information.

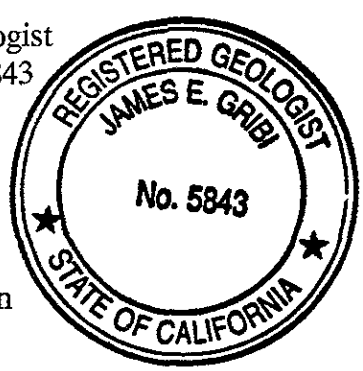
Very truly yours,

James E. Gribi
Registered Geologist
California No. 5843

Ted Zaferatos
Vice President

JEG/TZ:cc
Enclosures

c Johnny Lin



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1.0 INTRODUCTION

This report documents remediation activities and includes a workplan for additional investigation for the 1900 Lewelling Boulevard site in San Leandro, California (see Figures 1 and 2). The remediation activities conducted at the project site included; (1) The re-excavation and overexcavation of a waste oil. under ground storage tank (UST) excavation cavity; (2) Sampling of overexcavation pit bottom soils; (3) Construction of a bioremediation pad to remediate excavated soils; and (4) Periodic sampling of the bioremediation pad to monitor effectiveness of remediation. The purpose of these activities has been to remove and remediate impacted soil, and to document these activities for regulatory review.

1.1 Site Background

The project site was formerly occupied by a gasoline service station for many years prior to Mr. Johnny Lin's purchase of the property in 1985. According to Mr. Lin, as a condition of the sale and during escrow, four gasoline USTs were removed from a common excavation in December 1985. Soil sampling reports for the UST removal and overexcavation activities are contained in Appendix A. These soil sampling reports indicate that: (1) Four soil samples taken beneath the USTs after removal at depths ranging from 12 to 13.5 feet contained TPH-gasoline levels ranging from 7 pm to 450 ppm; (2) Three composite soil samples taken at depths of 10 feet and 15 feet from the UST excavation after apparent overexcavation contained TPH-gasoline levels ranging from nondetectable to 10 ppm; and (3) Two composite soil samples taken from the excavated soil stockpile contained 380 and 674 ppm of TPH-gasoline. It was Mr. Lin's understanding that following these activities, the San Leandro Fire Department granted closure for this case.

The previous owner and gas station operator at the project site was Mr. Henry Edward Pike, who apparently lived at 15367 Elvina Drive, San Leandro, California, 94579. According to Mr. Lin, Mr. Pike no longer lives in the area. Before purchasing the subject property, Mr. Lin was not informed about the existence of a 200-gallon waste oil UST behind the project site building. After discovering this UST, Mr. Lin contracted VCI of California to remove the UST. This waste oil UST was removed by VCI in October 1990. One soil sample taken below the tank contained significant levels of gasoline, motor oil, chlorinated solvents, and semi-volatile organic compounds.

Following sampling, the waste oil UST pit was backfilled with a mixture of clean backfill material and excavated soils.

1.2 Scope of Work

The following tasks were conducted in order to further assess soil and ground water quality in a downgradient direction from the former waste oil UST.

- **Task 1: Prepare brief workplan for submittal to Alameda County Department of Environmental Health.**
- **Task 2: Re-excavate and overexcavation waste oil UST cavity and collect two excavation pit bottom soil samples.**
- **Task 3: Build bioremediation pad and collect one composite soil sample for laboratory analysis.**
- **Task 4: Conduct periodic sampling of the bioremediation pad to monitor effectiveness of bioremediation.**
- **Task 5: Prepare summary report for submittal to the Alameda County Local Oversite Program (LOP).**

1.3 Limitations

In part, these findings, conclusions, and recommendations are based on the best available information known or made available by regulators, other consultants or other sources. Over time, the surficial evidence of some activities are obscured or obliterated entirely. It is possible that certain adverse conditions could exist at the site which were not detected in this evaluation.

The services provided under this contract as described in this report include professional

opinions and judgments based on data collected. These services have been provided according to generally accepted environmental protocol. The opinions and conclusions contained in this report are typically based on information obtained from:

1. Observations and measurements made by our field staff.
2. Contacts and discussions with regulatory agencies and others.

1.4 Regulatory Approval

Prior to beginning overexcavation and bioremediation activities, a letter workplan was submitted to Alameda County Department of Environmental Health for review (*Waste Oil UST Soil Excavation and Remediation*, Century West Engineering, January 14, 1991). Verbal approval of the workplan was granted by Bill Faulhaber of Alameda County LOP on January 17, 1991.

2.0 DESCRIPTION OF FIELD ACTIVITIES

The following field activities were conducted as part of this site investigation and remediation: (1) The backfilled UST cavity was re-excavated and overexcavated; (2) A bioremediation pad was constructed using excavated soil, along with added nutrients; and (3) Bioremediation pad soils were periodically sampled to assess the effectiveness of the remediation. These activities are described in the following sections:

2.1 Re-excavation of UST Cavity
2.2 Construction of Soil Bioremediation Pad
2.3 Periodic Sampling of Soil Bioremediation Pad

2.1 Re-excavation of UST Cavity

Re-excavation and overexcavation of the UST cavity was conducted by VCI of California on January 24, 1991. During excavation activities, excavated soils were field screened by a qualified Century West Engineering geologist using sight, smell, and a photoionization detector (PID).

After re-excavation of the original backfill material, the UST cavity measured approximately five feet by eight feet by six feet deep. The UST cavity was then overexcavated vertically to approximately ten feet in depth, and laterally five feet in a northeast direction, three feet in an southeast direction, and three feet in a southwest direction (the project site building adjoining the northwest side of the UST cavity precluded overexcavation in a northwest direction). Final excavation pit dimensions were approximately eight feet by fifteen feet by ten feet deep.

A brief description of field observations of subsurface soils is contained in Table 1.

Table 1
SUBSURFACE SOIL CONDITIONS
Johnny Lin UST Site

Depth	Location in Excavation Pit: Southwest End	Middle	Northeast End
_5 ft_		Grey brown SAND mixed with grey brown clayey SILT, some dark grey HC stain, PID=50 units.	
_7.5 ft_	Grey clayey SILT, sl. sandy, moist, grey sl. HC odor, PID= 4 units.		Grey clayey SILT, sl. sandy, moist, mod HC odor, PID=75 units.
_10 ft_	SS-1 9.5 ft: Grey silty CLAY, sl. sandy, wet, no HC odor or stain, PID= 1 unit	Grey clayey SILT, spongy, moist to wet, very sl. HC odor, PID= 0 units.	Grey clayey SILT, sl. sandy, moist to wet, sl. HC odor, PID=25 units. SS-2 10.5 ft: Grey silty CLAY, sl. sandy, wet, no HC odor or stain, PID= 0 units.

Ground water was not present in the excavation pit after completing excavation activities. However, ground water seeped into the pit very slowly, filling the deepest areas of the pit to a depth of approximately 9.5 feet below grade.

After completion of overexcavation activities, two soil samples, SS-1 and SS-2, were taken from the pit floor at depths of 9.5 feet at the southwest end and 10.5 feet at the northeast end, respectively (see Figure 2 for sample locations). These samples were taken directly from the backhoe bucket using a 2-inch by 6-inch brass tube as follows: approximately three inches of exposed soil was scraped away and a clean brass tube was driven into the soil. Extra care was taken to minimize excess void in the tube. After removing the tube, it was quickly sealed with aluminum foil and plastic end caps, wrapped tightly with tape, labeled, and immediately placed in cold storage for transport to the laboratory under formal chain of custody. All sampling equipment was thoroughly cleaned and decontaminated between each sample collection by triple rinsing: first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water.

Following excavation, the UST cavity was backfilled with clean dry sand to approximate grade and fenced off from the surrounding parking area.

2.2 Construction of Soil Bioremediation Pad

Construction of the soil bioremediation pad was conducted by VCI of California on January 24, 1991. Construction activities included: (1) Laying out a visqueen cover on the asphalt parking area; (2) Placing eight-by-eight-inch treated beams around the perimeter to make a 32 feet by 32 feet enclosure; (3) Spreading a four to five-inch lift of clean imported sand on the visqueen within the enclosure; (4) As the re-excavation and overexcavation of the UST cavity ensued, hydrocarbon-laden soil was placed on the sand lift within the enclosure; (5) Approximately 40 cubic yards of excavated soil was mixed with approximately 15 cubic yards (10 tons) of steer manure and spread evenly to make a 1-1/2 feet thick lift over the entire enclosure.; and (6) The constructed bioremediation pad was covered with visqueen.

2.3 Periodic Sampling of Soil Bioremediation Pad

Immediately after completing construction, the bioremediation pad soils were sampled to provide a baseline to assess remediation effectiveness. After this initial sampling, the bioremediating soils were sampled three times in 1991, and twice in 1993. Sampling on each of these occasions consisted of taking four discrete brass tube samples from equidistant quadrant locations of the bioremediation pad (see Figure 2). At each of these four sampling points, the sample was taken by first, scraping away the top three to four inches of soil, and then pushing the brass sleeve into undisturbed soil, making sure to completely fill the tube. Each sample was then preserved using the procedures previously described in this report.

How often was soil filled/watered?

3.0 LABORATORY ANALYSIS OF SOIL SAMPLES

3.1 Laboratory Analysis of Pit Bottom Soils

Two soil samples (SS-1 and SS-2) taken at opposite ends of the excavation pit were analyzed for the following constituents to verify the level of cleanup.

- Total Oil and Grease (TOG by EPA Method 5520E,F)
- Total Petroleum Hydrocarbons-Diesel (TPH-diesel by Method 3550/LUFT)
- Total Petroleum Hydrocarbons-Gasoline (TPH-gasoline by Method 8015 Modified)
- Benzene, Toluene, Xylenes and Ethylbenzene (BTXE by Method 8240)
- Chlorinated Hydrocarbons (EPA Method 8240)
- Semivolatile Organic Compounds (EPA Method 8270)

— — TOG not run on in-situ samples SS-1 and SS-2; only excavated soil analyses included TOG

Results of these analyses are summarized in Table 2. Laboratory data reports for these analyses are contained in Appendix B.

Table 2
SUMMARY OF UST PIT SOIL SAMPLE ANALYSES
Johnny Lin UST Site

Constituent	*Concentration (parts per million)*	
	SS-1 (SW)	*SS-2 (NE)*
TPH-diesel	60[1]	ND(1)[2]
TPH-gasoline	ND(1)	ND(1)
BTXE Constituents:		
Benzene	0.019	ND(.001)
Toluene	0.230	ND(.001)
Ethylbenzene	0.300	ND(.001)
Xylenes	2.300	ND(.001)
Chlorinated Hydrocarbons:		
1,1-Dichloroethane	0.005	ND(.005)
1,2-Dichloroethene (total)	0.009	ND(.005)
1,1,1,-Trichloroethane	0.030	ND(.005)
1,1,2,2-Tetrachloroethane	0.047	ND(.005)
Semi-Volatiles[3]:		
2-Methylnaphthalene	0.120	ND(.100)
Bis(2-Ethylhexyl)phthalate	0.150	0.110
Di-N-Butylphthalate	4.400	4.700
Butylbenzylphthalate	ND(.100)	0.250

Note: TOG not run on SS-1, -2 also extraction for TPH analysis did not use purge and trap for TPH-G analysis, only sonication (35?

1 - The lab report states, "Diesel range hydrocarbons were quantitated for samples 6849-1 [SS-1] and 6849-3,4,5,6 [SS-3.1,2,3,4] samples. However, the chromatogram appears to suggest that the dominant hydrocarbons present are larger than the diesel fuels and therefore, the samples may contain motor oils, lubricating fuels, or other heavier fuels".

2 - Not detected above the value expressed in the parentheses.

3 - In addition to the EPA Method 8270 analytes listed in the table, the laboratory report lists "other compounds" for samples SS-1, SS-2 and composite sample SS-3.1,2,3,4. These other compounds are tentatively identified compounds, with estimated concentrations, which are not 8270 analytes. Because the identification of these compounds is tentative, and because the TPH-diesel and TOG would also detect these compounds, these other compounds are not quantified in the summary tables.

3.2 Laboratory Analysis of Bioremediation Pad Soils

One composite sample (SS-3.1, 3.2, 3.3, and 3.4) taken from the bioremediation pad at the beginning of remediation was analyzed for the following constituents:

- Total Oil and Grease (TOG by EPA Method 5520E,F)
- Total Petroleum Hydrocarbons-Diesel (TPH-diesel by Method 3550/LUFT)
- Total Petroleum Hydrocarbons-Gasoline (TPH-gasoline by Method 8015 Modified)
- Benzene, Toluene, Xylenes and Ethylbenzene (BTXE by Method 8240)
- Chlorinated Hydrocarbons (EPA Method 8240)
- Semivolatile Organic Compounds (EPA Method 8270)

In order to monitor the effectiveness of the bioremediation, the following four samples were analyzed for Total Oil and Grease (Standard Method 5520E,F): SS-4.1,2,3,4 taken on March 15, 1991; SS-5.1,2,3,4 taken on June 27, 1991; SS-6.1,2,3,4 taken on October 3, 1991; and SS-7.1,2,3,4 taken on July 9, 1993. By analyzing for Total Oil and Grease only, we were able to effectively monitor the bioremediation and, at the same time, minimize laboratory expenses.

In order to assess the overall effectiveness of the bioremediation one final composite sample; SP-2.1,2,3,4 taken on November 16, 1993; was analyzed for the following constituents:

- Total Petroleum Hydrocarbons - Motor Oil (TPH-motor oil by Method 3550/8015 Modified)
- Volatile Organic Compounds (EPA Method 8240)
- Semi-volatile Organic Compounds (EPA Method 8270)

Analytical results for all bioremediation pad monitoring samples are summarized in Table 3. Laboratory data reports for the SS-3.1-4 sample are in Appendix B. Laboratory data reports for all other bioremediation pad soil samples are contained in Appendix C.

Table 3
SUMMARY OF BIOREMEDIATION PAD MONITORING
Johnny Lin UST Site

Constituent	Concentration (parts per million)					
	SS-3.1-4 01-24-91	SS-4.1-4 03-15-91	SS-5.1-4 06-27-91	SS-6.1-4 10-03-91	SS-7.1-4 07-09-93	SP-2.1-4 11-16-93 (final sample)
TOG (non-polar)	12,000	5,300	4,500	4,300	1,200	--[1]
TPH-diesel	6,800[2]	--	--	--	--	--
TPH-gasoline	160	--	--	--	--	--
TPH-motor oil	--	--	--	--	--	800
Volatiles:						
Benzene	0.029	--	--	--	--	ND(.005)[3]
Toluene	0.680	--	--	--	--	ND(.005)
Ethylbenzene	0.530	--	--	--	--	ND(.005)
Xylenes	5.400	--	--	--	--	ND(.005)
1,1-Dichloroethene	0.007	--	--	--	--	ND(.005)
1,1,1-Trichloroethane	0.030	--	--	--	--	ND(.005)
Tetrachloroethane	0.083	--	--	--	--	ND(.005)
Semi-Volatiles:						
Napthalene	2.70	--	--	--	--	ND(.330)
2-Methylnaphthalene	2.90	--	--	--	--	ND(.330)
Phenanthrene	0.38	--	--	--	--	ND(.330)
Di-N-Butylphthalate	1.20	--	--	--	--	ND(.330)
Bis(2-Ethylhexyl)phthalate	4.50	--	--	--	--	ND(.330)

1 - Not analyzed for this constituent

2 - The lab report states, "Diesel range hydrocarbons were quantitated for samples 6849-1 [SS-1] and 6849-3,4,5,6 [SS-3.1,2,3,4] samples. However, the chromatogram appears to suggest that the dominant hydrocarbons present are larger than the diesel fuels and therefore, the samples may contain motor oils, lubricating fuels, or other heavier fuels".

3 - Not detected above the value expressed in the parentheses.

In order to determine if the bioremediated soil was acceptable for at a Class II landfill disposal,the final composite sample, SP-2.1,2,3,4, was also analyzed for the following constituents.

- CAM 17 Metals using TTLC
- ICP Metals Scan for five metals (Sb, Be, Pb, Hg, Tl) to achieve lower detection levels required by the landfill.
- Reactivity, Corrosivity, Ignitablility (RCI)

Analytical results for these analyses are summarized in Table 4. Laboratory data reports for these analyses are contained in Appendix C.

Table 4
SUMMARY OF BIOREMEDIATION PAD SOIL DISPOSAL ANALYSES
Johnny Lin UST Site

Constituent	*Concentration (parts per million)*	
	CAM17 TTLC Metals	*CAM17 STLC Metals*
Metals:		
Antimony	ND(10)[1]	ND(1.0)
Arsenic	2.1	--[2]
Barium	98	--
Beryllium	ND(2.0)	ND(0.1)
Cadmium	ND(2.0)	--
Chromium	36	--
Chromium+6	ND(2.0)	-
Cobalt	8.7	-
Copper	45	--
Lead	35	1.8
Mercury	0.5	ND(0.005)
Molybdenum	ND(5.0)	--
Nickel	38	--
Selenium	ND(0.5)	--
Silver	3.4	--
Thallium	ND(20)	ND(0.05)
Vanadium	22	--
Zinc	110	--
RCI:	*Result*	
Reactivity (pH)	7.4	
Corrosivity Sulfide Cyanide (Total)	 68 ppm 0.9 ppm	
Ignitability (Flashpoint)	>140°F	

1 - Not detected above the value expressed in the parentheses.

2 - Not analyzed for this constituent.

4.0 RESULTS OF OVEREXCAVATION AND REMEDIATION ACTIVITIES

4.1 Results of UST Pit Overexcavation

Both field screening and analytical results indicate that re-excavation and overexcavation of the UST cavity was effective in removing hydrocarbon-laden soil. Field screening during overexcavation using sight, smell, and PID indicated that the greatest impact to subsurface soils occurred along the northeast (expected crossgradient or upgradient) side of the UST cavity. Thus, whereas the southwest and southeast sides of the UST cavity were excavated only three feet laterally, the northeast side was excavated five feet laterally. Analytical results from SS-1 and SS-2, taken at the approximate capillary fringe, indicate that all significant hydrocarbon-impacted soils have been removed. Although the southwest sample, SS-1, contained 60 ppm of TPH-D (as motor oil, according to the laboratory report), this level is below the 100-ppm regulatory guideline for required excavation of hydrocarbon-impacted soils.

4.2 Results of Bioremediation Activities

Analytical results from the composite soil sample (SS-3.1,2,3,4) taken on January 24, 1991, immediately after construction of the bioremediation pad, show elevated levels of TPH-gasoline, TPH-diesel (motor oil), Total Oil & Grease, BTXE constituents, chlorinated hydrocarbons, and semi-volatile organic compounds. During the three years of bioremediation, the soils were periodically sampled for Total Oil & Grease. These results, which are shown graphically in Figure 3, show a 93% decrease in Total Oil & Grease over the three-year period. Furthermore, the final composite sample, taken on November 16, 1993, contained no detectable volatile organic compounds (including BTXE and chlorinated hydrocarbons) or semi-volatile organic compounds. Thus, the bioremediation process was effective in substantially reducing the levels of target compounds.

Based on analytical results of the final composite sample, including the additional CAM 17 metals and RCI analyses, the bioremediated soil is acceptable for disposal at BFI Vasco Road Class II Landfill in Livermore, California.

5.0 WORKPLAN TO CONDUCT SOIL AND GROUND WATER INVESTIGATION

Based on the results of the waste oil UST overexcavation and remediation, and on the sampling reports for the previous removal of the four gasoline USTs at the site, this workplan proposes the installation and sampling of five ground water monitoring wells at the site. The purpose of the proposed workplan activities will be to: (1) Investigate soil and ground water quality in a verified downgradient direction from the former waste oil UST; (2) Investigate soil and ground water quality in a verified downgradient direction from the four former gasoline USTs; and (3) Investigate soil and ground water quality on the verified upgradient side of the project site.

In order to meet the project goals, this workplan proposes: (1) The drilling and sampling of five soil borings; (2) The installation of five ground water monitoring wells within the borings; and (3) The monitoring of ground water quality and gradient in the five wells. These proposed activities are described in the following paragraphs.

5.1 Regulatory Approval

Prior to implementing this workplan, written approval will be obtained from Alameda County UST Local Oversite Program. In addition, monitoring well permits will be obtained from Alameda County Zone 7. Prior to beginning the drilling activities, a Site Safety Plan for this work will be issued and a tailgate safety meeting will be conducted with all site workers. All work will be conducted under the direct supervision of a certified professional.

5.2 Location of Wells

In order to meet the project goals, the five wells will be sited as follows (see Figure 4 for well locations): (1) One well will be located approximately ten feet in the expected downgradient (southwesterly) direction from the former waste oil UST; (2) One of the wells will be located within the former gasoline UST excavation; (3) Two of the wells will be located in the expected downgradient direction from the former gasoline USTs; and (4) One well

will be located on the expected upgradient (easterly) side of the site.

5.3 Drilling and Sampling of Well Borings

Each well boring will be drilled to a total depth of approximately 20 feet (approximately ten feet below the ground water table) using hollow stem auger equipment. Soil samples will be collected from each boring at approximate depths of five, 10, and 15 feet below grade.

Undisturbed soils will be sampled in advance of the auger as follows: (1) A two-inch inside diameter California-style split spoon sampler will be driven into undisturbed soil ahead of the drill bit; (2) The sampler will be raised quickly to the surface and the brass liners exposed; (3) The brass liner containing the most undisturbed soil will be quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample will be immediately placed in a cooler with crushed ice for transport to the analytical laboratory under formal chain-of-custody. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. All downhole drilling equipment, including auger and drill bit, will be steam cleaned before and after drilling each well boring. Steam cleaning rinseate will be contained in sealed drums. Drilling cuttings will be placed on clear plastic and will remain covered with plastic pending laboratory analysis of soil samples.

5.4 Installation of Monitoring Wells

The wells will be constructed using two-inch diameter Schedule 40 threaded PVC casing according to the following specifications: (1) 0.020-inch slotted well casing will be placed from approximately 20 feet to 5 feet in depth (exact screen depths will be determined in the field in order to place screen approximately five feet above and ten feet below the water table); (2) Filter sand will be placed around the casing to a depth of approximately 4 feet below grade; (3) A bentonite seal will be placed around the casing from 3 to 4 feet in depth; and (4) A grout seal consisting of a cement/sand slurry (bentonite less than 5 percent) will be placed in the remaining annulus. The top of the well will be enclosed in a traffic rated locking box set in concrete slightly above grade. A Well Construction Diagram is shown on Figure 5.

5.5 Well Development and Sampling

After allowing the cement seal to cure for at least 48 hours, each well will be developed and sampled. Prior to well development, the water level will be measured in each well and a single bail of water will be taken to check for free product using a clean disposable PVC bailer. Well development will consist of purging the well of at least four well volumes using a two-inch disposable bailer. During well development, ground water will be periodically monitored for free-floating presence, pH, specific conductance, temperature and visible clarity.

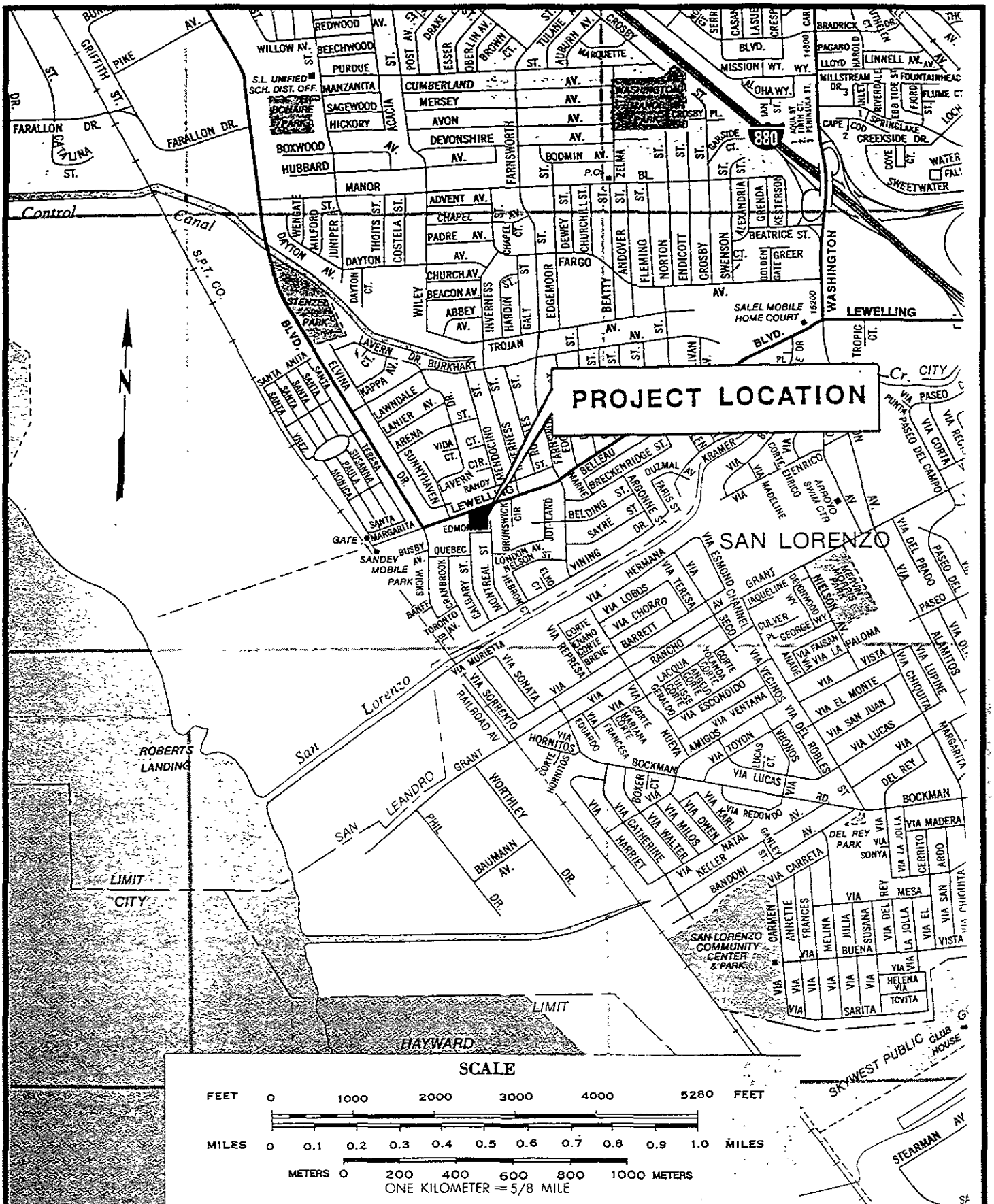
After these parameters have stabilized, ground water will be sampled directly from the pump outlet in the following manner: (1) Two one-liter amber jars and four 40-ml glass VOC vials will be completely filled with a minimum of agitation; (2) After making sure that no air bubbles are present in each container, each container will be tightly sealed with a teflon-lined septum; and (3) Each container will be labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All purged ground water will be stored onsite in sealed drums pending analytical results of the ground water samples. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described above.

5.6 Laboratory Analysis of Soil and Water Samples

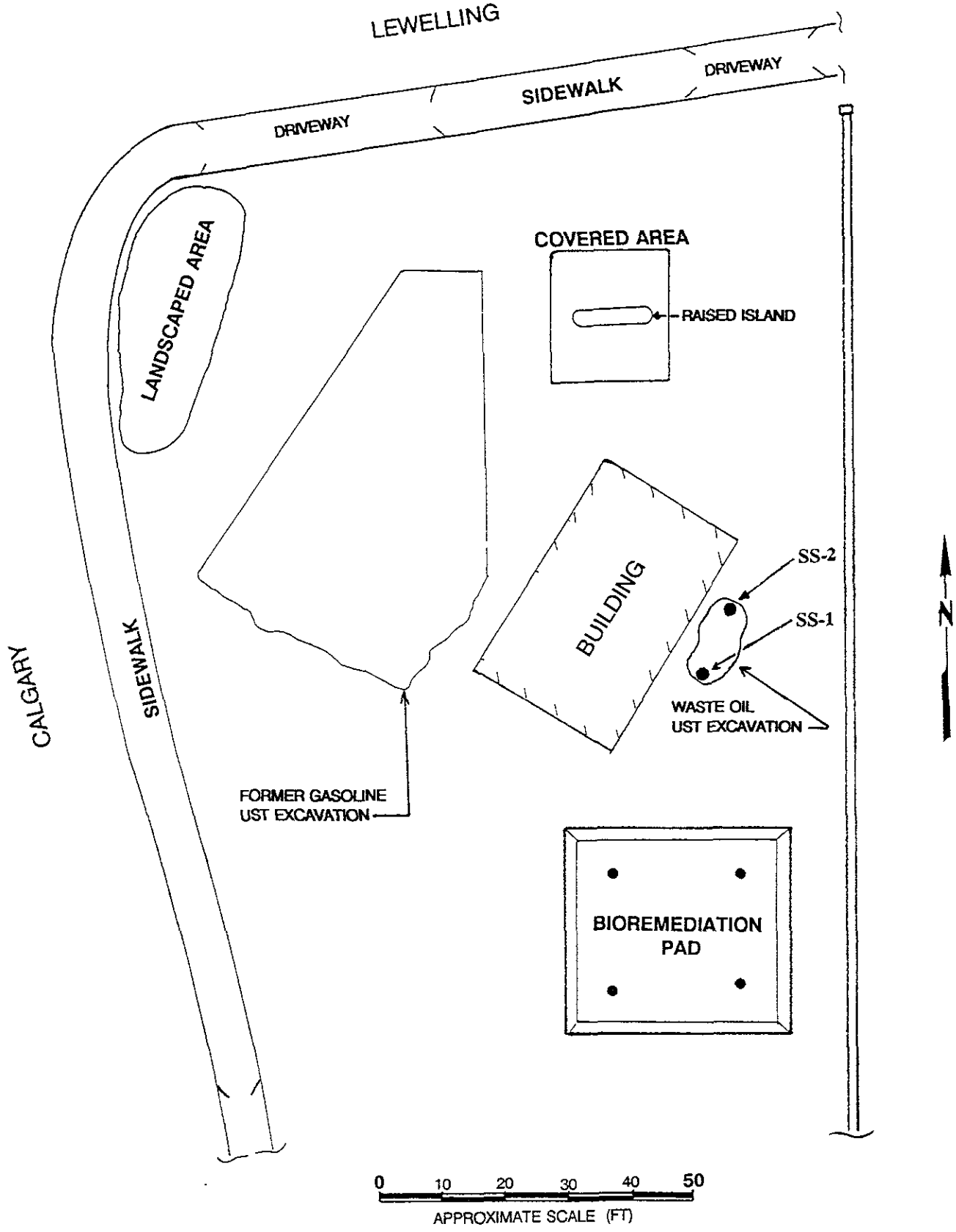
Soil and ground water samples from each of the wells will be analyzed at a California - certified analytical laboratory as follows: • Two soil samples and one water sample from both the upgradient well and the waste oil UST will be analyzed for TPH-gas, TPH-diesel/motor oil, volatile organic compounds, and semi-volatile organic compounds; • Two soil samples and one water sample from each of the three gasoline UST wells will be analyzed for TPH-gas and BTXE; and • One soil sample from each of the three gasoline UST borings will be analyzed for total lead.

5.7 Preparation of Summary Report

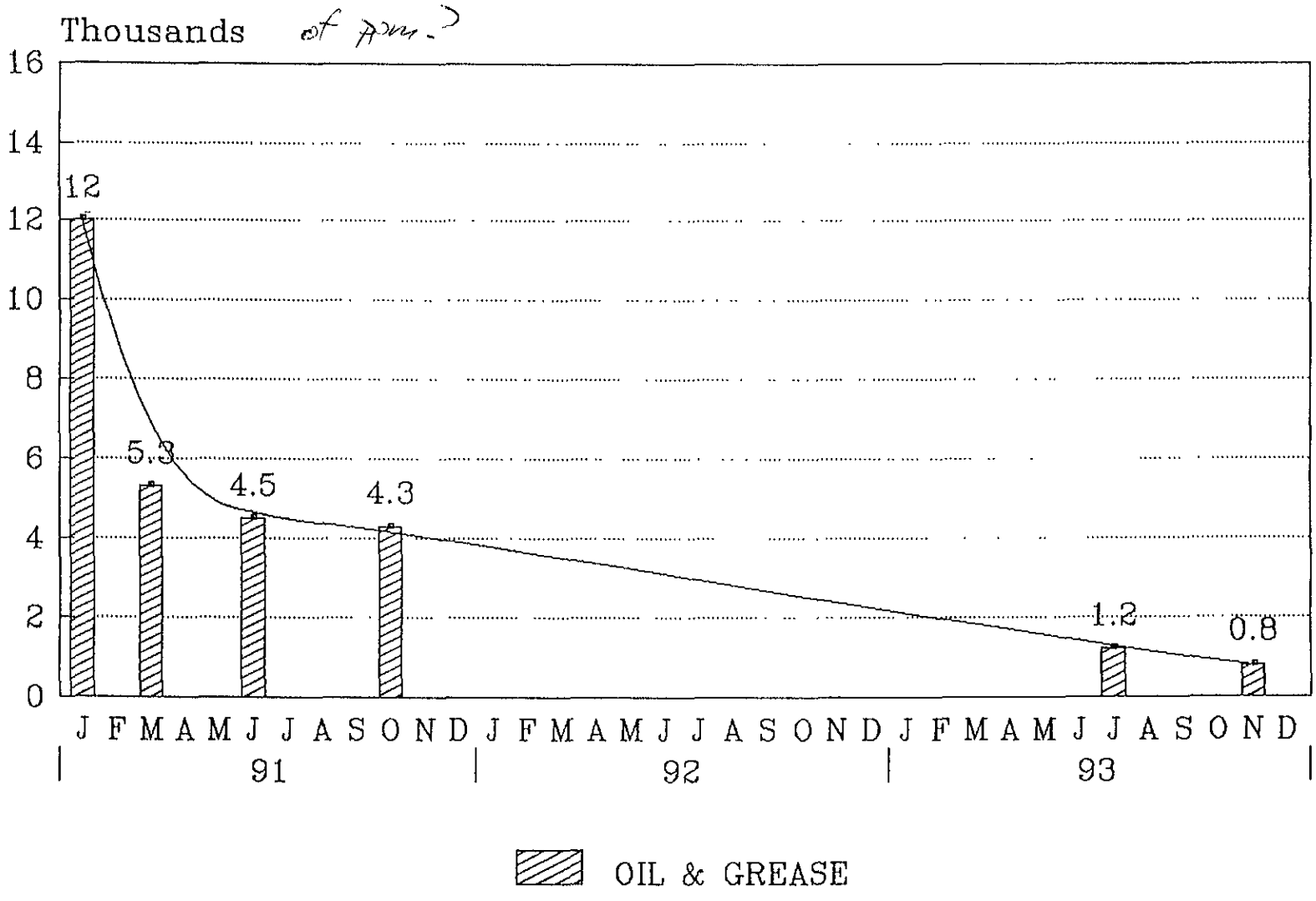
A summary report will be prepared for submittal to Alameda County Department of Environmental Health. This report will include: (1) Description of drilling and well installation activities; (2) Description of sampling methods; (3) Description of subsurface conditions; (4) Analytical results; (5) Conclusions.



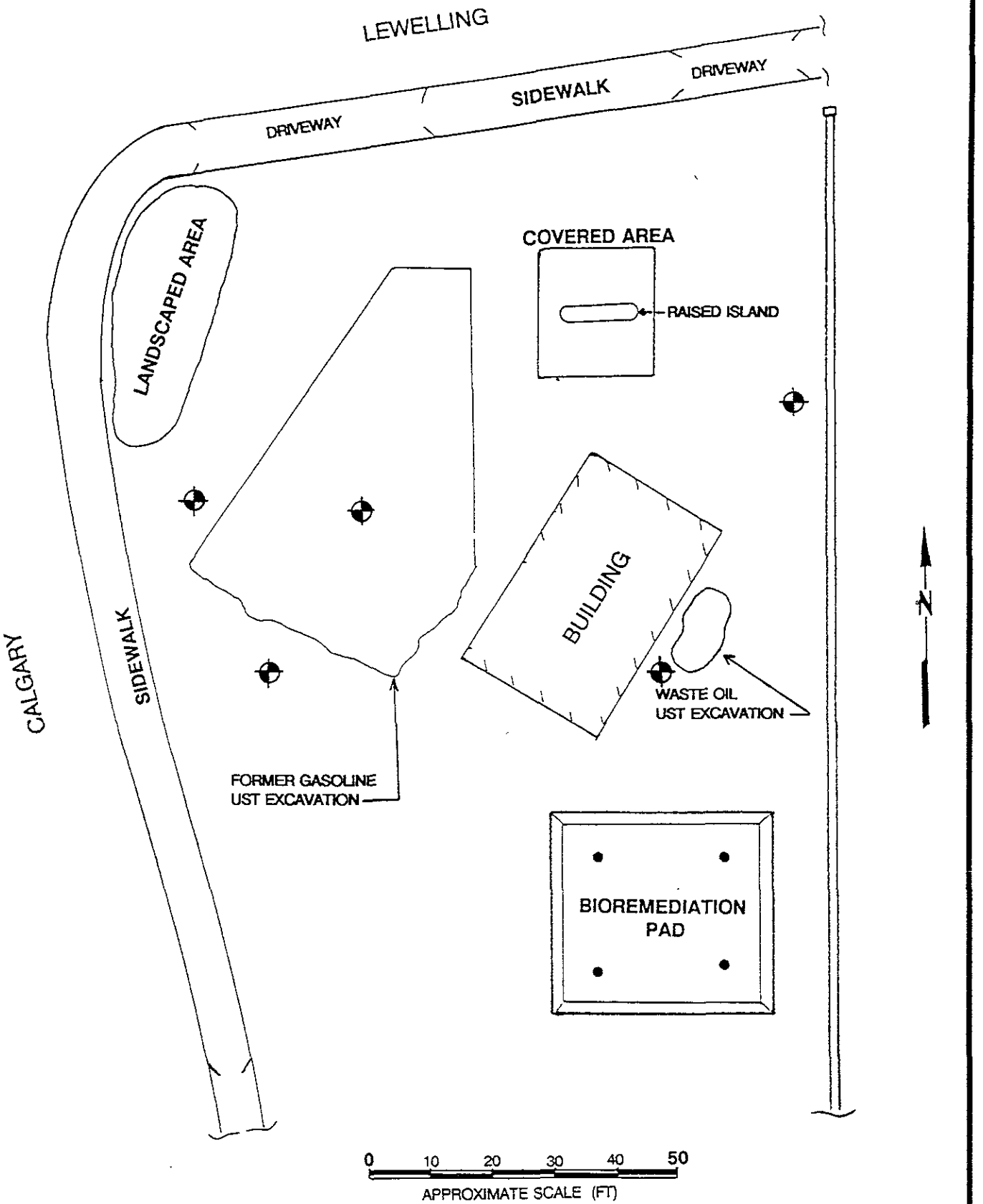
DESIGNED BY:	CHECKED BY:	**FIGURE 1** **SITE VICINITY MAP** CWEC: 20507-001-01	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				



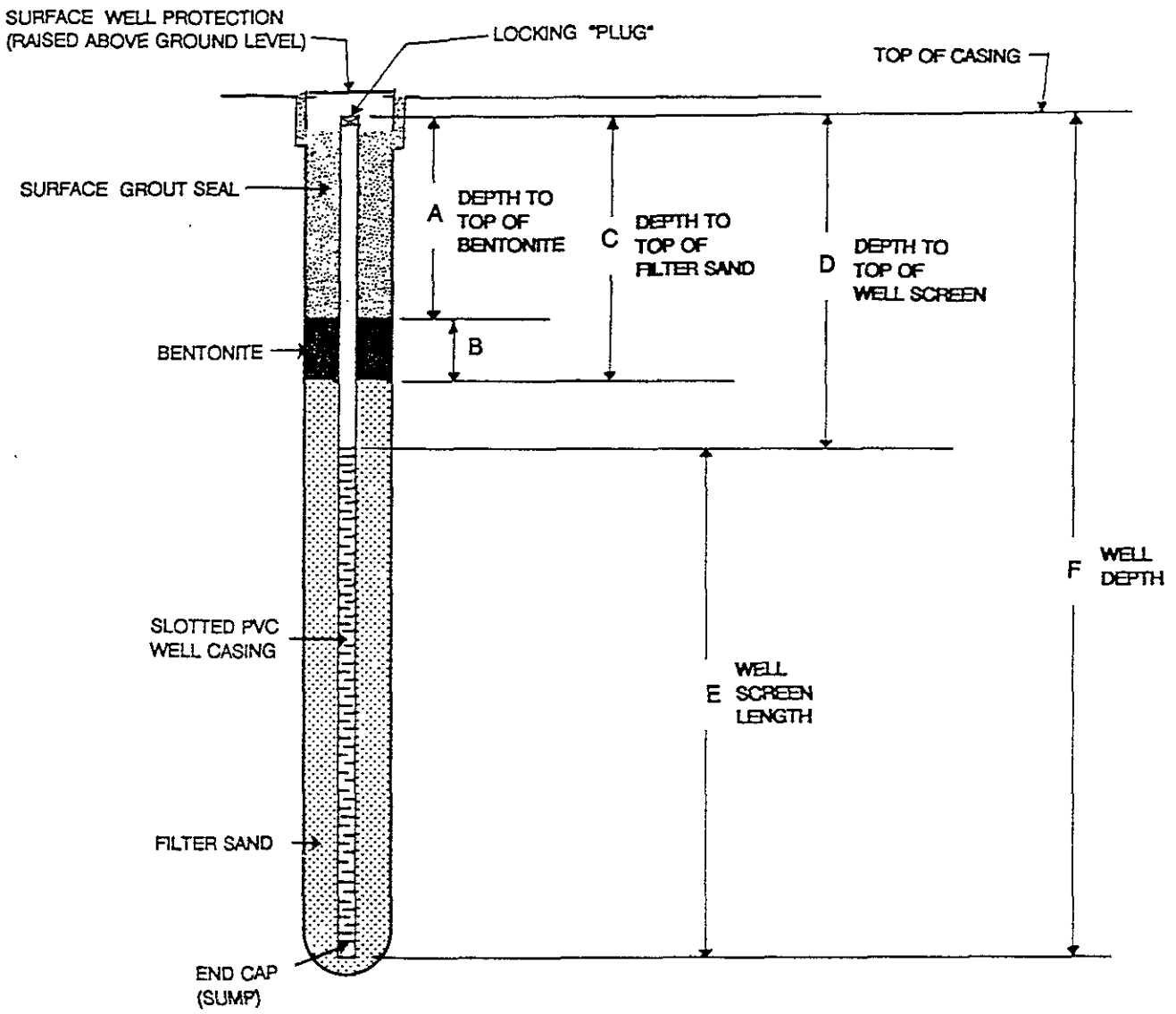
DESIGNED BY:	CHECKED BY:	FIGURE 2 SITE PLAN	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:		CWEC: 20507-001-02		



DESIGNED BY :	DATE :	CENTURY WEST ENGINEERING	**FIGURE 3** **RESULTS OF BIOREMEDIATION**	DRAWING NO.
DRAWN BY :	SCALE :			
CHECKED BY :	SEC. :		**CWEC: 20507-001-02**	SHEET NO.
DRAWING NO. :				



DESIGNED BY:	CHECKED BY:	FIGURE 4 PROPOSED WELL LOCATIONS CWEC: 20507-001-02	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				



WELL SPECIFICATIONS			
WELL CASING:	Two-inch Sch. 40 PVC	A	3.0 feet
WELL SLOT SIZE:	0.020 inch	B	1.0 feet
BENTONITE:	Hydrated pellets	C	4.0 feet
SURFACE SEAL:	Cement slurry (bent. < 5%)	D	5.00 feet
WELL PLUG:	Locking expandable cap	E	15.00 feet
SURFACE PROTECTION:	Traffic rated, water tight	F	20.00 feet

DESIGN BY		CHECKED BY		APPROVED	CENTURY WEST ENGINEERING CORPORATION
SURVEY BY		SCALE	NO SCALE	DATE	
DRAWN BY	JEG	DWG. NO.			

FIGURE 5
WELL CONSTRUCTION DIAGRAM

CWEC: 20507-001-02

APPENDIX A

SAMPLING REPORTS FOR GASOLINE UST REMOVAL ACTIVITIES

December 17, 1985

Campanella Demolition
5401 San Leandro Street
Oakland, CA 94601

536-4800

ATTN: Charles Campanella ✓ Joe

Following are the results of analyses on the samples described below.

Project Number:	BTS #85345M2, 1900 Lewelling, San Leandro
Lab Numbers:	34924, 34926, 34929, 34931
Number of Samples:	4
Sample Type:	Soils
Date Received:	December 12, 1985 from Blaine Tech Services
Analyses Requested:	Volatile Fuel Hydrocarbons

The method of analysis for volatile fuel hydrocarbons is taken from E.P.A. Methods 8015 and 5030. The samples are examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector as well as a photoionization detector.

Lab Number	Sample Identification	Results Parts per Million (dry soil basis) Volatile Fuel Hydrocarbons (calculated as gasoline)
34924	#1	270.
34926	#3	7.
34929	#6	28.
34931	#8	450.

Patricia L. Murphy
Patricia L. Murphy

PLM/jd

cc: Blaine Tech Services

BLAINE 34924-34931
TECH SERVICES

P.O. BOX 574
SAN JOSE, CA 951..
(408) 723-39..

1900
Lawe...
San Lean...

85345 M2

Include ... of this project designation in lab report

... 17:10 ... 12/11/85 performed by Heleg Mptinu...

...			ACCEPTED BY		
10:35 hrs.	12/12/85	Heleg Mpulinu	12:35 hrs.	12/12/85	Per...
__:__ hrs.	/ /85		__:__ hrs.	/ /85	
__:__ hrs.	/ /85		__:__ hrs.	/ /85	
__:__ hrs.	/ /85		__:__ hrs.	/ /85	

	...	ANALYSIS	LAB #	PRELIMS	...
(#1)	Soil - 48 HR	GAS	34924		2...
#2	hold		34925		
(#3)	48 HR RUSH		34926		...
#4	hold		34927		
#5	hold		34928		
(#6)	48 HR Rush		34929		...
#7	hold		34930		
(#8)	48 HR RUSH		34931		45C
#9					
#10					

...: Routine 1,3,6,8 [48 hr Rush

REPORT TO:
Campanella Demolition
5401 San Leandro St.
Oakland, CA 94601
Attn Charles Campanella
Phone (415) 536-4800

BILLING INVOICE TO:
Same
Attn
Verbal/Ref PO From:

cc ... (...)

SPECIAL INSTRUCTIONS

( ) Phone results to ...
( ) Phone results to client ...

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Dale Bowyer

San Leandro Fire Department
835 East 14th St.
San Leandro, Ca 94577
ATTN: Joe Ferreira

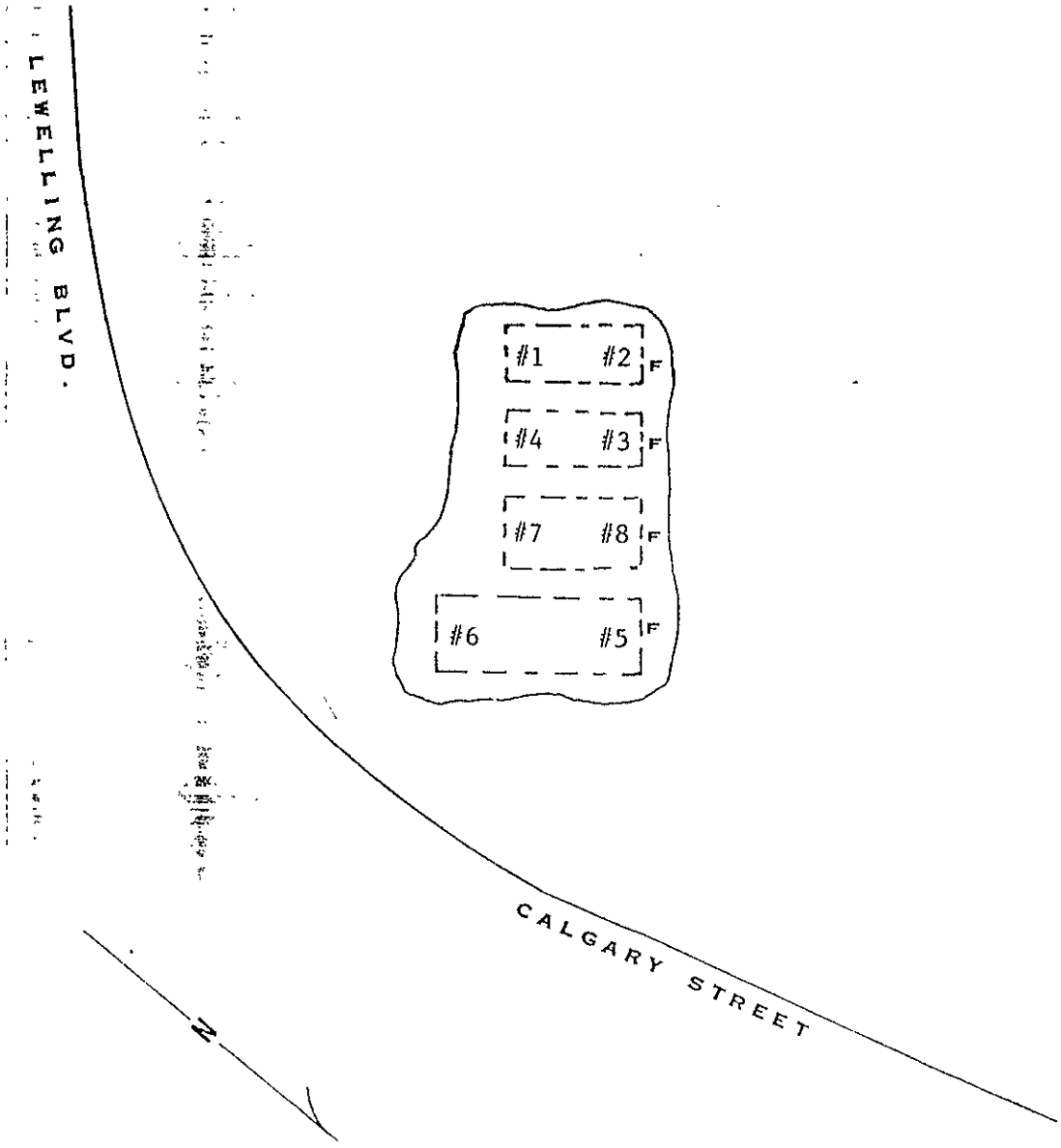
If I can be of any further assistance, please call.

Richard C. Blaine

RCB/tls

BLAINE
TECH SERVICES

SAMPLING REPORT 85345M2 12/11/85 CAMPANELLA DEMOLITION, 1900 LEWELLING BLVD., SAN LEANDRO, CA



MAP REF: THOMAS BROS.
SAN MATEO COUNTY
P. 27 B-6

SCALE: 1/10" = 2'

LEGEND: F = FILL PIPE

(#1) SOIL FROM 12'
ANALYSIS FOR VOLATILE HYDROCARBONS DUE TO GASOLINE AT IT CORP-ORATION SANTA CLARA REGIONAL OFFICE
ITSC LAB NO. 34924

#2 SOIL FROM 12'
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34925
SAMPLE PLACED ON 'HOLD'

(#3) SOIL FROM 12'
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34926

#4 SOIL FROM 13'6"
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34927
SAMPLE PLACED ON 'HOLD'

#5 SOIL FROM 13'
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34928
SAMPLE PLACED ON 'HOLD'

(#6) SOIL FROM 13'4"
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34929

#7 SOIL FROM 13'
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34930
SAMPLE PLACED ON 'HOLD'

(#8) SOIL FROM 13'6"
ANALYSIS FOR GASOLINE
ITSC LAB NO. 34931
SAMPLE PLACED ON 'HOLD'

Helen Mawhinney

HELEN MAWHINNEY

BLAINE
TECH SERVICES

P.O. BOX 5
SAN JOSE, CA 9
(408) 72

January 11, 1986

Campanella Demolition
5401 San Leandro Street
Oakland, CA 94601

Attention: Charles Campanella

Re: Field sampling at 1900 Lewelling Blvd.
San Leandro, CA
on
December 11, 1985

SAMPLING REPORT

Sampling was performed in accordance with approved methodology at the locations shown on the accompanying site diagram. The lab numbers assigned to the samples are given on the site diagram. Samples were collected in appropriate containers, which were sealed, chilled and transported to the laboratory for analysis. Analytical services were provided by IT Corporation Santa Clara Regional Office with a separate report and billing invoice referencing their lab numbers.

Tanks

age -- unspecified

type -- two 3,000 gallon gasoline
one 6,000 gallon gasoline
one 8,000 gallon gasoline

reason for removal -- discontinuation of on site storage

Reportage

Submission to the Regional Water Quality Control Board and the Fire Department should include copies of both the sampling report and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

THE LABORATORY REPORT HAD NOT REACHED US AT THE TIME THIS SAMPLING REPORT WAS COMPILED.

BE SURE TO ATTACH A COPY OF THE ORIGINAL LAB REPORT IN LIEU OF THIS PAGE BEFORE SUBMISSION TO THE REGULATORY AGENCIES.

BLAINE TECH SERVICES

35810-35811

P.O BOX 5745
SAN JOSE, CA 9515.
(408) 723-3974

860142 A2 1900 Lewelling San Leandro

Include ALL of this project designation on lab report(s)

Field sampling completed 0:30 hrs. 1-14-86 performed by [illegible]

RELEASED BY		ACCEPTED BY	
11:55 hrs.	1-6 [illegible]	16:50 hrs.	1-14-86 [illegible]
:__ hrs.	-6	:__ hrs.	-86
:__ hrs.	-6	:__ hrs.	-86
:__ hrs.	-86	:__ hrs.	-86

	TYPE	ANALYSIS	LAB #	PRELIMS	FINAL
#1	[illegible]	GAS	35810	380 ppm	411 ppm wet wt.
#2			35811	624 ppm	
#3					
#4					
#5					
#6					
#7					
#8					
#9					
#10					

TURN AROUND 48 hours

REPORT TO: Campbell Demolition
3401 San Leandro St
Oakland, Ca 94601
Attn Charles Campbell
Phone (415) 536-4800

BILLING INVOICE TO: Same
Attn
Verbal/Ref PO From:

cc BLAINE TECH SERVICES (always)
cc OTHER:

SPECIAL INSTRUCTIONS

( ) Phone results to BTS
( ) Phone results to client direct

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Dale Bowyer

San Leandro Fire Department
835 East 14th St.
San Leandro, Ca 94577
ATTN: Richard Soloman

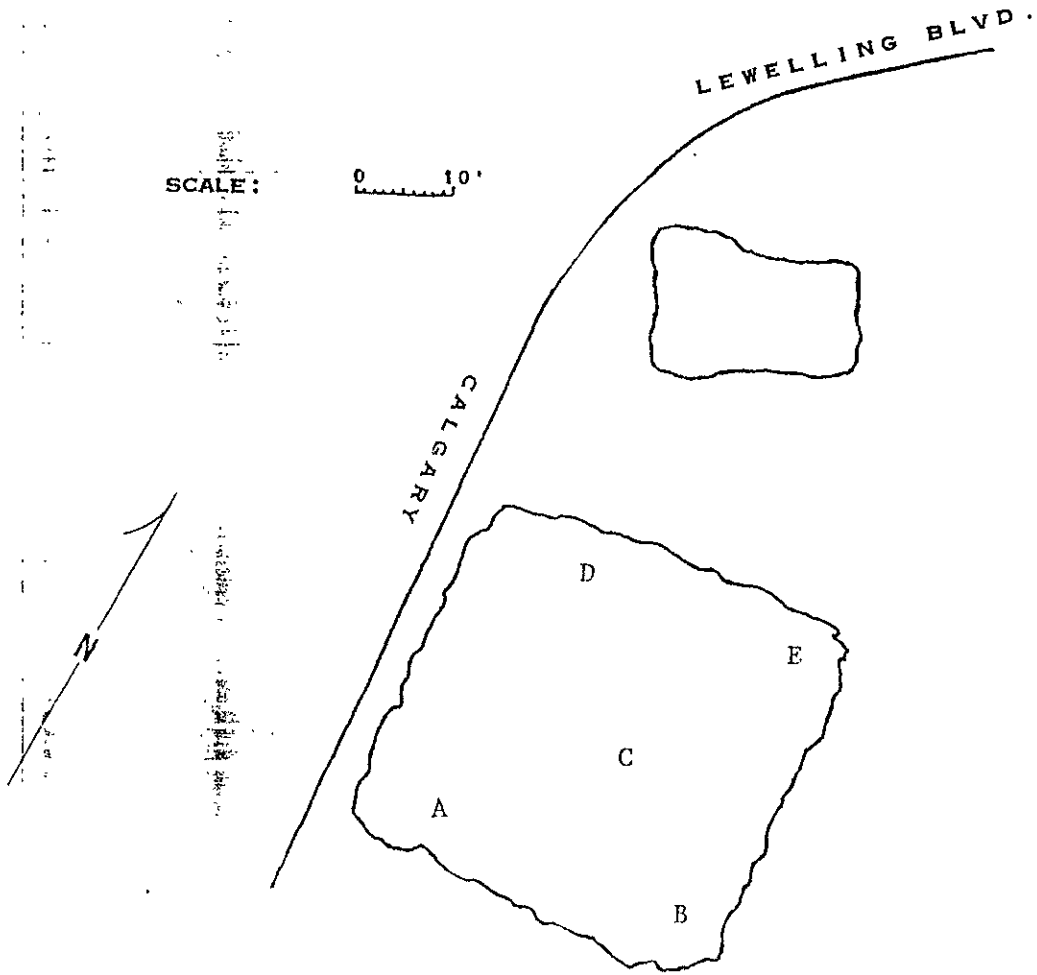
If I can be of any further assistance, please call.

Richard C. Blaine

RCB/tls

BLAINE TECH SERVICES

SAMPLING REPORT 860142A2 1-14-86 CAMPANELLA DEMOLITION, 1900 LEWELLING BLVD., SAN LEANDRO, CA



MAP REF: THOMAS BROS. ALAMEDA COUNTY P. 27 C-6

#1 STOCKPILE SOIL COMPOSITE FROM SAMPLE POINTS A-E AT STOCKPILE SURFACE ANALYSIS FOR VOLATILE HYDROCARBONS DUE TO GASOLINE AT IT CORPORATION SANTA CLARA REGIONAL OFFICE ITSC LAB NO. 35810

#2 STOCKPILE SOIL COMPOSITE FROM SAMPLE POINTS A-E AT 12-18" BELOW SURFACE ANALYSIS FOR GASOLINE ITSC LAB NO. 35811

SAMPLING PERFORMED BY BRENT ADAMS

DIAGRAM PREPARED BY TAMMIE STALLINGS

BLAINE
TECH SERVICES

P.O. BO[illegible]
SAN JOSE [illegible]
(408) 72[illegible]

January 29, 1986

Campanella Demolition
5401 San Leandro Street
Oakland, CA 94601

Attention: Charles Campanella

Re: Sampling of stockpiled soil at 1900 Lewelling
San Leandro, CA
on
January 14, 1986

SAMPLING REPORT

Sampling was performed in accordance with approved methodology at the locations shown on the accompanying site diagram. The lab numbers assigned to the samples are given on the site diagram. Samples were collected in appropriate containers, which were sealed, chilled and transported to the laboratory for analysis. Analytical services were provided by IT Corporation Santa Clara Regional Office with a separate report and billing invoice referencing their lab numbers.

Reportage

Submission to the Regional Water Quality Control Board and the Fire Department should include copies of both the sampling report and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

Campanella Demolition
5401 San Leandro Street
Oakland, CA 94601

January 13, 1986

ATTN: Charles Campanella

Following are the results of analyses on the samples described below.

Project Number: BTS 85364M1, Lewelling, San Leandro

Lab Numbers: 35383-35385
Number of Samples: 3
Sample Type: soil
Date Received: 12/31/85
Analyses Requested: Volatile Fuel Hydrocarbons

The method of analysis for volatile fuel hydrocarbons is taken from E.P.A. Methods 8015 and 5030. The samples are examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector as well as a photoionization detector.

		Results
		Parts per Million- dry soil basis
Lab Number	Sample Identification	Volatile Fuel Hydrocarbons (calculated as gasoline)
35383	#1	4.
35384	#2	None Detected
35385	#3	10.
Detection Limit		2.

Patricia L. Murphy

PLM/ksr

cc: Blaine Tech Services

BLAINE TECH SERVICES
P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

SAN LEAN... Leading

8536 4M1

Include ... of this project designation in lab reports

Field sampling completed 14:30 hrs. 12-30-85 performed by Heley Mpu...

RELEASED BY		ACCEPTED BY	
19:25 hrs. 12-30-	Heley Mpuhirray	: hrs. - -85	
12:00 hrs. 12-31-	Reid Blaine	12:00 hrs. 12-31-85	
: hrs. - -		2:12 hrs. 12-31-85	
: hrs. - -85		: hrs. - -85	

	TYPE	ANALYSIS	LAB #	PRELIMS	
#1	Soil	GAS	35383		4
#2		↓			
#3			85		
#4					
#5					
#6					
#7					
#8					
#9					
#10					

... Routine

REPORT to:
Camparolla Demolition
5401 San Leandro St.
Oakland, CA 94601
Attn Charles Camparolla
Phone (415) 534-4800

BILLING INVOICE TO:
Same
Attn
Verbal/Ref PO From:

cc BLAINE TECH SERVICES (always)
cc OTHER:

SPECIAL INSTRUCTIONS

( ) Phone results to BTS
( ) Phone results to client direct

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Dale Bowyer

San Leandro Fire Department
835 East 14th St.
San Leandro, Ca 94577
ATTN: Joe Ferreira

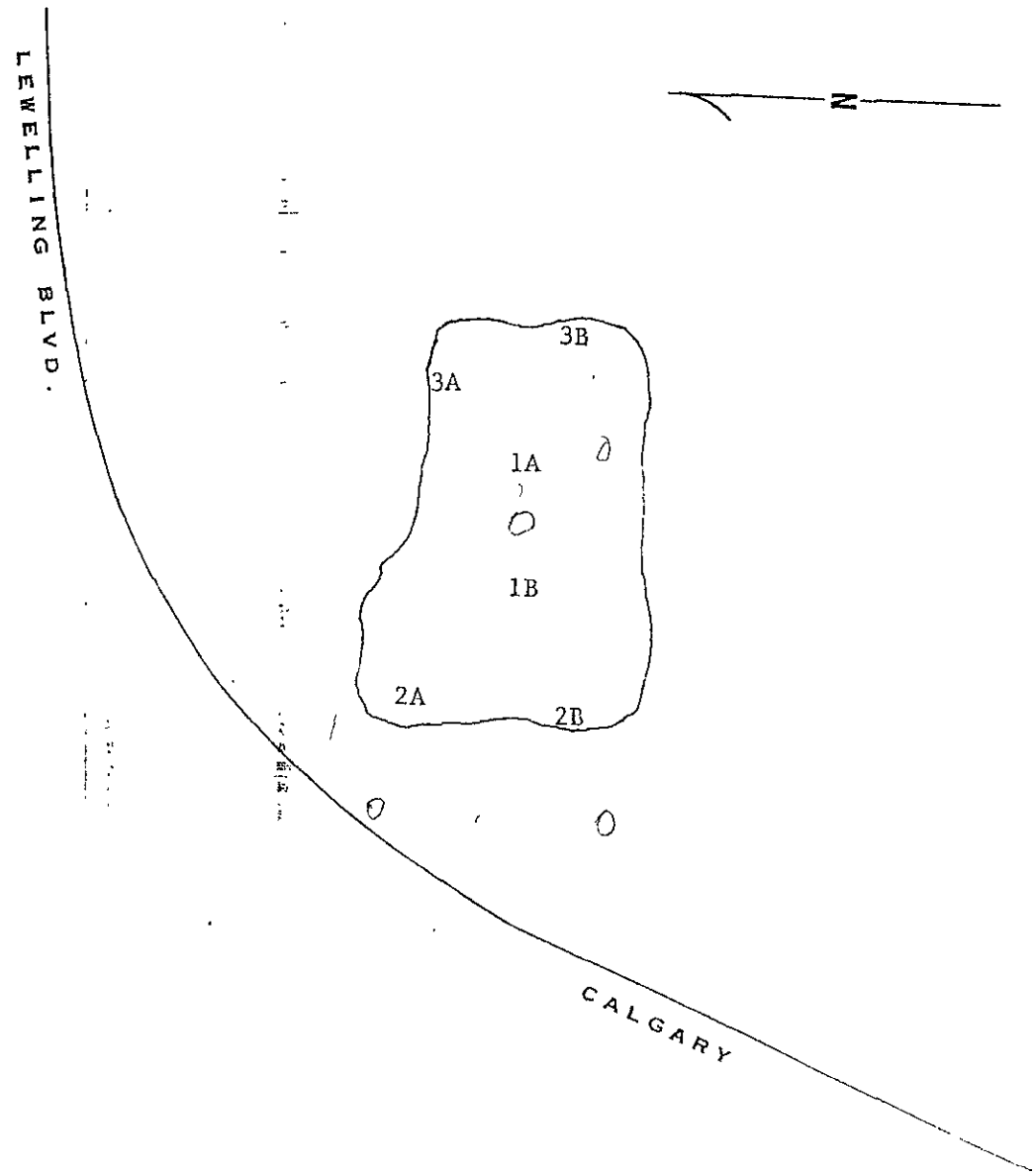
If I can be of any further assistance, please call.

Richard C. Blaine

RCB/tls

BLAIN...
TECH SERVICES

SAMPLING REPORT 85364M1 12-30-85 CAMPANELLA DEMOLITION, 1900 LEWELING BLVD., SAN LEANDRO, CA



SCALE: 1/10" = 2'

MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 27 B-6

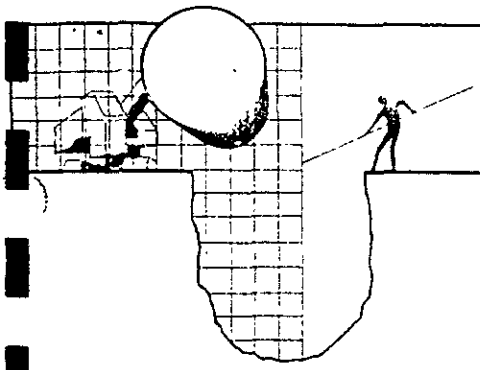
#1 COMPOSITE SOIL SAMPLE FROM POINTS A & B AT 15'
ANALYSIS FOR VOLATILE HYDROCARBONS DUE TO GASOLINE AT IT CORPORATION SANTA CLARA REGIONAL OFFICE
ITSC LAB NO. 35383

#2 COMPOSITE SOIL SAMPLE FROM POINTS A & B AT 10'
ANALYSIS FOR GASOLINE
ITSC LAB NO. 35384

#3 COMPOSITE SOIL SAMPLE FROM POINTS A & B AT 10-11'
ANALYSIS FOR GASOLINE
ITSC LAB NO. 35385

SAMPLING PERFORMED BY
HELEN MAWHINNEY

DIAGRAM PREPARED BY
TAMMIE STALLINGS



BLAINE TECH SERVICES

January 16, 1986

Campanella Demolition
5401 San Leandro Street
Oakland, CA 94601

Attention: Charles Campanella

Re: Field sampling at 1900 Lewelling Blvd.
San Leandro, CA
on
December 30, 1985

SAMPLING REPORT

Sampling was performed in accordance with approved methodology at the locations shown on the accompanying site diagram. The lab numbers assigned to the samples are given on the site diagram. Samples were collected in appropriate containers, which were sealed, chilled and transported to the laboratory for analysis. Analytical services were provided by IT Corporation Santa Clara Regional Office with a separate report and billing invoice referencing their lab numbers.

Tanks

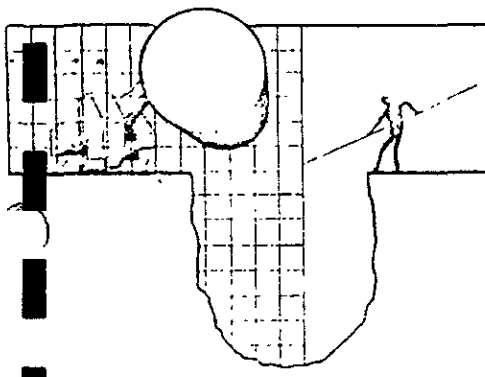
age -- unspecified

type -- two 3,000 gallon gasoline
one 6,000 gallon gasoline
one 8,000 gallon gasoline

reason for removal -- discontinuation of on site storage

Reportage

Submission to the Regional Water Quality Control Board and the Fire Department should include copies of both the sampling report and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.



BLAINE TECH SERVICES

P O BOX 5?
SAN JOSE, CA 9?
(408) 7?1-?

January 29, 1986

Campanella Demolition
5401 San Leandro Street
Oakland, CA 94601

Attention: Charles Campanella

Re: Field sampling at 1900 Lewelling
San Leandro, CA

INVOICE 85345M2

Portal to portal billing as follows:

12-11-85	Field services	4.0 hrs.	$160.00
	Liaison, site diagam & report		60.00
	Container charge @ $5.00 each		40.00
12-30-85	Field services	4.0 hrs.	160.00
	Liaison, site diagram & report		40.00
	Container charge		15.00
1-14-86	Field services	3.0 hrs.	120.00
	Liaison, site diagram & report		40.00
	Container charge		10.00
		PLEASE REMIT	$645.00

DUE AND PAYABLE UPON PRESENTATION OF THIS INVOICE.

APPENDIX B

LABORATORY DATA REPORTS
WASTE OIL PIT BOTTOM SAMPLES

CENTURY TESTING LABORATORIES

February 5, 1991

CWEC - Dublin
J. Linn Soil Excavation
Project #2050700101

RE: Laboratory Log #6849

Century Testing Laboratories is pleased to provide you with our report for the analyses you requested. Enclosed are the results for your samples which were received on January 25, 1991.

Should you require additional Technical Explanation including QA/QC, please do not hesitate to contact Dr. Mel Lindbeck, QA/QC Manager or his assistant Bruce Bale. To request additional Sample Containers and Coolers, please contact our Sample Custodians, Lisa York or Teresa Griggs. To inquire about Sample Status or if you need help with Sample Scheduling, please contact Bob Hart, Production Supervisor. Questions concerning Invoices should be directed to Gari Jaeger.

Thank you for selecting Century Testing for your analytical testing needs. We look forward to serving you again.

Sincerely,

CENTURY TESTING LABORATORIES, INC.

Christine Moehl

Christine Moehl
Data Validation Specialist

Enclosure

1444 NW College Way • P.O. Box 1174 • Bend, Oregon 97701
(503) 382-6432 • **(800) 458-9672** • Fax: (503) 382-6432

825 N.E. Multnomah, Suite 425 • Portland, Oregon 97232
(503) 231-6078 • Fax: (503) 231-6482

Century Testing
Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

LABORATORY ANALYSIS

TOTAL PETROLEUM HYDROCARBONS

for H.B. HCs, only

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

EXTRACTION METHOD: 3550
ANALYSIS METHOD: LUFT
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE EXTRACTED: 1/28/91
DATE ANALYZED: 1/30/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI
METHOD DETECTION LIMIT: 1 mg/kg

LAB SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE CONC. GAS*	SAMPLE CONC. DIESEL*	UNITS
6849-1	SS-1	N.D.	60**	mg/kg
6849-2	SS-2	N.D.	N.D.	mg/kg
6849-3 }	SS-3.1}			
6849-4 }	SS-3.2}			
6849-5 }	SS-3.3} COMP	160	6800**	mg/kg
6849-6 }	SS-3.4}			

*N.D. means "not detected."

**Diesel range hydrocarbons were quantitated for samples 6849-1 and composite 6849-3,4,5,6 samples. However, the chromatogram appears to suggest that the dominant hydrocarbons present are larger than the diesel fuels and, therefore, the samples may contain motor oils or lubriucating fuels, or other heavier fuels.

Percent Recovery value generated from laboratory control samples is 95%. Percent Recovery values were within established control limits. ccu

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/05/91

Century Testing
Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

LABORATORY ANALYSIS

BTEX ANALYSIS

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

LAB SAMPLE NO.: 6849-1
SAMPLE DESCRIP.: SS-1
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE ANALYZED: 1/28/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

ANALYSIS METHOD NUMBER	CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
EPA 8240	Benzene	19	1	ug/kg
EPA 8240	Toluene	230	1	ug/kg
EPA 8240	Ethylbenzene	300	1	ug/kg
EPA 8240	Xylenes	2300	1	ug/kg

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY**
1,2-DICHLOROETHANE-D4	103%
TOLUENE-D8	111%
BROMOFLUOROBENZENE	108%

*N.D. means "not detected."

**Percent Recovery values were within established control limits. ccc

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/04/91

Century Testing
Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

LABORATORY ANALYSIS

CHLORINATED HYDROCARBON ANALYSIS

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD: EPA 624/8240
LAB SAMPLE NO.: 6849-1
SAMPLE DESCRIP.: SS-1
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE ANALYZED: 1/28/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
CHLOROMETHANE	N.D.	10	ug/kg
BROMOMETHANE	N.D.	10	ug/kg
VINYL CHLORIDE	N.D.	10	ug/kg
CHLOROETHANE	N.D.	10	ug/kg
METHYLENE CHLORIDE	N.D.	5	ug/kg
1,1-DICHLOROETHENE	N.D.	5	ug/kg
1,1-DICHLOROETHANE	5	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	9	5	ug/kg
CHLOROFORM	N.D.	5	ug/kg
1,2-DICHLOROETHANE	N.D.	5	ug/kg
1,1,1-TRICHLOROETHANE	30	5	ug/kg
CARBON TETRACHLORIDE	N.D.	5	ug/kg
BROMODICHLOROMETHANE	N.D.	5	ug/kg
1,2-DICHLOROPROPANE	N.D.	5	ug/kg
CIS-1,3-DICHLOROPROPENE	N.D.	5	ug/kg
TRICHLOROETHENE	N.D.	5	ug/kg
DIBROMOCHLOROMETHANE	N.D.	5	ug/kg
1,1,2-TRICHLOROETHANE	N.D.	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	N.D.	5	ug/kg
BROMOFORM	N.D.	5	ug/kg
TETRACHLOROETHENE	N.D.	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	47	5	ug/kg

*N.D. means "not detected."

Century Testing Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-1 CHLORINATED HYDROCARBON ANALYSIS

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
CHLOROBENZENE	N.D.	5	ug/kg
1,2-DICHLOROBENZENE	N.D.	5	ug/kg
1,3-DICHLOROBENZENE	N.D.	5	ug/kg
1,4-DICHLOROBENZENE	N.D.	5	ug/kg

OTHER CONSTITUENTS FOUND

NONE

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY**
1,2-DICHLOROETHANE-D4	103%
TOLUENE-D8	111%
BROMOFLUOROBENZENE	108%

*N.D. means "not detected."

**Percent Recovery values were within established control limits. CW

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/05/91

Century Testing
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LABORATORY ANALYSIS

SEMI-VOLATILES

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD: EPA 625-8270
LAB SAMPLE NO.: 6849-1
SAMPLE DESCRIP.: SS-1
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE EXTRACTED: 1/28/91
DATE ANALYZED: 1/31/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
PHENOL	N.D.	100	ug/kg
ANILINE	N.D.	100	ug/kg
BIS(2-CHLOROETHYL)ETHER	N.D.	100	ug/kg
2-CHLOROPHENOL	N.D.	100	ug/kg
1,3-DICHLOROBENZENE	N.D.	100	ug/kg
1,4-DICHLOROBENZENE	N.D.	100	ug/kg
BENZYL ALCOHOL	N.D.	100	ug/kg
1,2-DICHLOROBENZENE	N.D.	100	ug/kg
2-METHLYPHENOL	N.D.	100	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	N.D.	100	ug/kg
4-METHYLPHENOL	N.D.	100	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	N.D.	100	ug/kg
HEXACHLOROETHANE	N.D.	100	ug/kg
NITROBENZENE	N.D.	100	ug/kg
ISOPHORONE	N.D.	100	ug/kg
2-NITROPHENOL	N.D.	100	ug/kg
2,4-DIMETHYLPHENOL	N.D.	100	ug/kg
BENZOIC ACID	N.D.	200	ug/kg
BIS(2-CHLOROETHOXY)METHANE	N.D.	100	ug/kg
2,4-DICHLOROPHENOL	N.D.	100	ug/kg
1,2,4-TRICHLOROBENZENE	N.D.	100	ug/kg
NAPHTHALENE	N.D.	100	ug/kg
4-CHLOROANILINE	N.D.	100	ug/kg
HEXACHLOROBUTADIENE	N.D.	100	ug/kg
4-CHLORO-3-METHYL PHENOL	N.D.	100	ug/kg
2-METHYLNAPHTHALENE	120	100	ug/kg
HEXACHLOROCYCLOPENTADIENE	N.D.	100	ug/kg
2,4,6-TRICHLOROPHENOL	N.D.	100	ug/kg
2,4,5-TRICHLOROPHENOL	N.D.	100	ug/kg

*N.D. means "not detected."

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CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-1 SEMI-VOLATILES

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
2-CHLORONAPHTHALENE	N.D.	100	ug/kg
2-NITROANILINE	N.D.	100	ug/kg
DIMETHYL PHTHALATE	N.D.	100	ug/kg
ACENAPHTHYLENE	N.D.	100	ug/kg
3-NITROANILINE	N.D.	100	ug/kg
ACENAPHTHENE	N.D.	100	ug/kg
2,4-DINITROPHENOL	N.D.	100	ug/kg
4-NITROPHENOL	N.D.	100	ug/kg
DIBENZOFURAN	N.D.	100	ug/kg
2,4-DINITROTOLUENE	N.D.	100	ug/kg
2,6-DINITROTOLUENE	N.D.	100	ug/kg
DIETHYLPHTHALATE	N.D.	100	ug/kg
4-CHLOROPHENYL-PHENYLETHER	N.D.	100	ug/kg
FLUORENE	N.D.	100	ug/kg
4-NITROANILINE	N.D.	100	ug/kg
4,6-DINITRO-2-METHYLPHENOL	N.D.	100	ug/kg
N-NITROSODIPHENYLAMINE	N.D.	100	ug/kg
4-BROMOPHENYL-PHENYLETHER	N.D.	100	ug/kg
HEXACHLOROBENZENE	N.D.	100	ug/kg
PENTACHLOROPHENOL	N.D.	100	ug/kg
PHENANTHRENE	N.D.	100	ug/kg
ANTHRACENE	N.D.	100	ug/kg
DI-N-BUTYLPHTHALATE	4400	100	ug/kg
FLUORANTHENE	N.D.	100	ug/kg
BENZIDINE	N.D.	100	ug/kg
PYRENE	N.D.	100	ug/kg
BUTYLBENZYLPHTHALATE	N.D.	100	ug/kg
3,3'-DICHLOROBENZIDINE	N.D.	100	ug/kg
BENZO(A)ANTHRACENE	N.D.	100	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	150	100	ug/kg
CHRYSENE	N.D.	100	ug/kg
DI-N-OCTYL PHTHALATE	N.D.	100	ug/kg
BENZO(B)FLUORANTHENE	N.D.	100	ug/kg
BENZO(K)FLUORANTHENE	N.D.	100	ug/kg
BENZO(A)PYRENE	N.D.	100	ug/kg
INDENO(1,2,3-CD)PYRENE	N.D.	100	ug/kg
DIBENZ(A,H)ANTHRACENE	N.D.	100	ug/kg
BENZO(G,H,I)PERYLENE	N.D.	100	ug/kg

*N.D. means "not detected."

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CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-1 SEMI-VOLATILES

OTHER COMPOUNDS FOUND	ESTIMATED CONCENTRATION
UNKNOWN	200 mg/kg
4-PIPERIDINONE, 2,2,6,6-TETRAMETHYL	130 mg/kg
NAPHTHALENE, 1-METHYL	2200 mg/kg

90-12-0
91-57-6

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY*
2-FLUOROPHENOL (SURROGATE SPIKE)	107%
PHENOL-D5 (SURROGATE SPIKE)	108%
NITROBENZENE-D5 (SURROGATE SPIKE)	94%
2-FLUOROBIPHENYL (SURROGATE SPIKE)	83%
2,4,6-TRIBROMOPHENOL (SURROGATE SPIKE)	73%
P-TERPHENYL-D14 (SURROGATE SPIKE)	79%

*Percent Recovery values were within established control limits. all

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Reviewed and approved by:

John H. Tillman

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/05/91

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LABORATORY ANALYSIS

BTEX ANALYSIS

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

LAB SAMPLE NO.: 6849-2
SAMPLE DESCRIP.: SS-2
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE ANALYZED: 1/29/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

ANALYSIS METHOD NUMBER	CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
EPA 8240	Benzene	N.D.	1	ug/kg
EPA 8240	Toluene	N.D.	1	ug/kg
EPA 8240	Ethylbenzene	N.D.	1	ug/kg
EPA 8240	Xylenes	N.D.	1	ug/kg

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY**
1,2-DICHLOROETHANE-D4	101%
TOLUENE-D8	110%
BROMOFLUOROBENZENE	93%

*N.D. means "not detected."

**Percent Recovery values were within established control limits.

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

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LABORATORY ANALYSIS

CHLORINATED HYDROCARBON ANALYSIS

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD: EPA 624/8240
LAB SAMPLE NO.: 6849-2
SAMPLE DESCRIP.: SS-2
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE ANALYZED: 1/29/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
CHLOROMETHANE	N.D.	10	ug/kg
BROMOMETHANE	N.D.	10	ug/kg
VINYL CHLORIDE	N.D.	10	ug/kg
CHLOROETHANE	N.D.	10	ug/kg
METHYLENE CHLORIDE	N.D.	5	ug/kg
1,1-DICHLOROETHENE	N.D.	5	ug/kg
1,1-DICHLOROETHANE	N.D.	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	N.D.	5	ug/kg
CHLOROFORM	N.D.	5	ug/kg
1,2-DICHLOROETHANE	N.D.	5	ug/kg
1,1,1-TRICHLOROETHANE	N.D.	5	ug/kg
CARBON TETRACHLORIDE	N.D.	5	ug/kg
BROMODICHLOROMETHANE	N.D.	5	ug/kg
1,2-DICHLOROPROPANE	N.D.	5	ug/kg
CIS-1,3-DICHLOROPROPENE	N.D.	5	ug/kg
TRICHLOROETHENE	N.D.	5	ug/kg
DIBROMOCHLOROMETHANE	N.D.	5	ug/kg
1,1,2-TRICHLOROETHANE	N.D.	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	N.D.	5	ug/kg
BROMOFORM	N.D.	5	ug/kg
TETRACHLOROETHENE	N.D.	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	N.D.	5	ug/kg

*N.D. means "not detected."

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CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-2 CHLORINATED HYDROCARBON ANALYSIS

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
CHLOROBENZENE	N.D.	5	ug/kg
1,2-DICHLOROBENZENE	N.D.	5	ug/kg
1,3-DICHLOROBENZENE	N.D.	5	ug/kg
1,4-DICHLOROBENZENE	N.D.	5	ug/kg

OTHER CONSTITUENTS FOUND

NONE

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY**
1,2-DICHLOROETHANE-D4	101%
TOLUENE-D8	110%
BROMOFLUOROBENZENE	93%

*N.D. means "not detected."

**Percent Recovery values were within established control limits.

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

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Manager Analytical Services

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LABORATORY ANALYSIS

SEMI-VOLATILES

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD: EPA 625-8270
LAB SAMPLE NO.: 6849-2
SAMPLE DESCRIP.: SS-2
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE EXTRACTED: 1/28/91
DATE ANALYZED: 1/31/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
PHENOL	N.D.	100	ug/kg
ANILINE	N.D.	100	ug/kg
BIS(2-CHLOROETHYL)ETHER	N.D.	100	ug/kg
2-CHLOROPHENOL	N.D.	100	ug/kg
1,3-DICHLOROBENZENE	N.D.	100	ug/kg
1,4-DICHLOROBENZENE	N.D.	100	ug/kg
BENZYL ALCOHOL	N.D.	100	ug/kg
1,2-DICHLOROBENZENE	N.D.	100	ug/kg
2-METHLYPHENOL	N.D.	100	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	N.D.	100	ug/kg
4-METHYLPHENOL	N.D.	100	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	N.D.	100	ug/kg
HEXACHLOROETHANE	N.D.	100	ug/kg
NITROBENZENE	N.D.	100	ug/kg
ISOPHORONE	N.D.	100	ug/kg
2-NITROPHENOL	N.D.	100	ug/kg
2,4-DIMETHYLPHENOL	N.D.	100	ug/kg
BENZOIC ACID	N.D.	200	ug/kg
BIS(2-CHLOROETHOXY)METHANE	N.D.	100	ug/kg
2,4-DICHLOROPHENOL	N.D.	100	ug/kg
1,2,4-TRICHLOROBENZENE	N.D.	100	ug/kg
NAPHTHALENE	N.D.	100	ug/kg
4-CHLOROANILINE	N.D.	100	ug/kg
HEXACHLOROBUTADIENE	N.D.	100	ug/kg
4-CHLORO-3-METHYL PHENOL	N.D.	100	ug/kg
2-METHYLNAPHTHALENE	N.D.	100	ug/kg
HEXACHLOROCYCLOPENTADIENE	N.D.	100	ug/kg
2,4,6-TRICHLOROPHENOL	N.D.	100	ug/kg
2,4,5-TRICHLOROPHENOL	N.D.	100	ug/kg

*N.D. means "not detected."

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CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-2 SEMI-VOLATILES

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
2-CHLORONAPHTHALENE	N.D.	100	ug/kg
2-NITROANILINE	N.D.	100	ug/kg
DIMETHYL PHTHALATE	N.D.	100	ug/kg
ACENAPHTHYLENE	N.D.	100	ug/kg
3-NITROANILINE	N.D.	100	ug/kg
ACENAPHTHENE	N.D.	100	ug/kg
2,4-DINITROPHENOL	N.D.	100	ug/kg
4-NITROPHENOL	N.D.	100	ug/kg
DIBENZOFURAN	N.D.	100	ug/kg
2,4-DINITROTOLUENE	N.D.	100	ug/kg
2,6-DINITROTOLUENE	N.D.	100	ug/kg
DIETHYLPHTHALATE	N.D.	100	ug/kg
4-CHLOROPHENYL-PHENYLETHER	N.D.	100	ug/kg
FLUORENE	N.D.	100	ug/kg
4-NITROANILINE	N.D.	100	ug/kg
4,6-DINITRO-2-METHYLPHENOL	N.D.	100	ug/kg
N-NITROSODIPHENYLAMINE	N.D.	100	ug/kg
4-BROMOPHENYL-PHENYLETHER	N.D.	100	ug/kg
HEXACHLOROBENZENE	N.D.	100	ug/kg
PENTACHLOROPHENOL	N.D.	100	ug/kg
PHENANTHRENE	N.D.	100	ug/kg
ANTHRACENE	N.D.	100	ug/kg
DI-N-BUTYLPHTHALATE	4700	100	ug/kg
FLUORANTHENE	N.D.	100	ug/kg
BENZIDINE	N.D.	100	ug/kg
PYRENE	N.D.	100	ug/kg
BUTYLBENZYLPHTHALATE	250	100	ug/kg
3,3'-DICHLOROBENZIDINE	N.D.	100	ug/kg
BENZO(A)ANTHRACENE	N.D.	100	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	110	100	ug/kg
CHRYSENE	N.D.	100	ug/kg
DI-N-OCTYL PHTHALATE	N.D.	100	ug/kg
BENZO(B)FLUORANTHENE	N.D.	100	ug/kg
BENZO(K)FLUORANTHENE	N.D.	100	ug/kg
BENZO(A)PYRENE	N.D.	100	ug/kg
INDENO(1,2,3-CD)PYRENE	N.D.	100	ug/kg
DIBENZ(A,H)ANTHRACENE	N.D.	100	ug/kg
BENZO(G,H,I)PERYLENE	N.D.	100	ug/kg

*N.D. means "not detected."

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CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-2 SEMI-VOLATILES

OTHER COMPOUNDS FOUND	ESTIMATED CONCENTRATION
UNKNOWN	110 mg/kg
4-PIPERIDINONE, 2,2,6,6-TETRAMETHYL	190 mg/kg
SULFUR (S7)	150 mg/kg
SULFUR (S8)	6700 mg/kg
ALKANE	470 mg/kg

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY*
2-FLUOROPHENOL (SURROGATE SPIKE)	106%
PHENOL-D5 (SURROGATE SPIKE)	107%
NITROBENZENE-D5 (SURROGATE SPIKE)	100%
2-FLUOROBIPHENYL (SURROGATE SPIKE)	80%
2,4,6-TRIBROMOPHENOL (SURROGATE SPIKE)	62%
P-TERPHENYL-D14 (SURROGATE SPIKE)	78%

*Percent Recovery values were within established control limits.

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/04/91

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LABORATORY ANALYSIS

BTEX ANALYSIS

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

LAB SAMPLE NO.: 6849-3,4,5,6 COMP
SAMPLE DESCRIP.: SS-3.1,2,3,4, COMP
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE ANALYZED: 1/29/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

ANALYSIS METHOD NUMBER	CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
EPA 8240	Benzene	29	1	ug/kg
EPA 8240	Toluene	680	1	ug/kg
EPA 8240	Ethylbenzene	530	1	ug/kg
EPA 8240	Xylenes	5400	1	ug/kg

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY**
1,2-DICHLOROETHANE-D4	94%
TOLUENE-D8	117%
BROMOFLUOROBENZENE	105%

*N.D. means "not detected."

**Percent Recovery values were within established control limits. CWR

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

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Manager Analytical Services

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LABORATORY ANALYSIS

CHLORINATED HYDROCARBON ANALYSIS

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD: EPA 624/8240
LAB SAMPLE NO.: 6849-3,4,5,6 COMP
SAMPLE DESCRIP.: SS-3.1,2,3,4, COMP
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE ANALYZED: 1/29/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
CHLOROMETHANE	N.D.	10	ug/kg
BROMOMETHANE	N.D.	10	ug/kg
VINYL CHLORIDE	N.D.	10	ug/kg
CHLOROETHANE	N.D.	10	ug/kg
METHYLENE CHLORIDE	N.D.	5	ug/kg
1,1-DICHLOROETHENE	7	5	ug/kg
1,1-DICHLOROETHANE	N.D.	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	N.D.	5	ug/kg
CHLOROFORM	N.D.	5	ug/kg
1,2-DICHLOROETHANE	N.D.	5	ug/kg
1,1,1-TRICHLOROETHANE	30	5	ug/kg
CARBON TETRACHLORIDE	N.D.	5	ug/kg
BROMODICHLOROMETHANE	N.D.	5	ug/kg
1,2-DICHLOROPROPANE	N.D.	5	ug/kg
CIS-1,3-DICHLOROPROPENE	N.D.	5	ug/kg
TRICHLOROETHENE	N.D.	5	ug/kg
DIBROMOCHLOROMETHANE	N.D.	5	ug/kg
1,1,2-TRICHLOROETHANE	N.D.	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	N.D.	5	ug/kg
BROMOFORM	N.D.	5	ug/kg
TETRACHLOROETHENE	83	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	N.D.	5	ug/kg

*N.D. means "not detected."

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CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-3,4,5,6 COMP
 CHLORINATED HYDROCARBON ANALYSIS

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
CHLOROBENZENE	N.D.	5	ug/kg
1,2-DICHLOROBENZENE	N.D.	5	ug/kg
1,3-DICHLOROBENZENE	N.D.	5	ug/kg
1,4-DICHLOROBENZENE	N.D.	5	ug/kg

OTHER CONSTITUENTS FOUND

NONE

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY**
1,2-DICHLOROETHANE-D4	94%
TOLUENE-D8	117%
BROMOFLUOROBENZENE	105%

*N.D. means "not detected."

**Percent Recovery values were within established control limits.

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/05/91

Century Testing Laboratories, Inc.

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Bend, Oregon 97709
503-382-6432

LABORATORY ANALYSIS

SEMI-VOLATILES

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD: EPA 625-8270
LAB SAMPLE NO.: 6849-3,4,5,6 COMP
SAMPLE DESCRIP.: SS-3.1,2,3,4 COMP
MATRIX: SOIL
DATE SUBMITTED: 1/25/91
DATE EXTRACTED: 1/28/91
DATE ANALYZED: 1/31/91
DISCARD DATE: 3/25/91
COLLECTED BY: JIM GRIBI

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
PHENOL	N.D.	100	ug/kg
ANILINE	N.D.	100	ug/kg
BIS(2-CHLOROETHYL)ETHER	N.D.	100	ug/kg
2-CHLOROPHENOL	N.D.	100	ug/kg
1,3-DICHLOROBENZENE	N.D.	100	ug/kg
1,4-DICHLOROBENZENE	N.D.	100	ug/kg
BENZYL ALCOHOL	N.D.	100	ug/kg
1,2-DICHLOROBENZENE	N.D.	100	ug/kg
2-METHLYPHENOL	N.D.	100	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	N.D.	100	ug/kg
4-METHYLPHENOL	N.D.	100	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	N.D.	100	ug/kg
HEXACHLOROETHANE	N.D.	100	ug/kg
NITROBENZENE	N.D.	100	ug/kg
ISOPHORONE	N.D.	100	ug/kg
2-NITROPHENOL	N.D.	100	ug/kg
2,4-DIMETHYLPHENOL	N.D.	100	ug/kg
BENZOIC ACID	N.D.	200	ug/kg
BIS(2-CHLOROETHOXY)METHANE	N.D.	100	ug/kg
2,4-DICHLOROPHENOL	N.D.	100	ug/kg
1,2,4-TRICHLOROBENZENE	N.D.	100	ug/kg
NAPHTHALENE	2700	100	ug/kg
4-CHLOROANILINE	N.D.	100	ug/kg
HEXACHLOROBUTADIENE	N.D.	100	ug/kg
4-CHLORO-3-METHYL PHENOL	N.D.	100	ug/kg
2-METHYLNAPHTHALENE	2900	100	ug/kg
HEXACHLOROCYCLOPENTADIENE	N.D.	100	ug/kg
2,4,6-TRICHLOROPHENOL	N.D.	100	ug/kg
2,4,5-TRICHLOROPHENOL	N.D.	100	ug/kg

*N.D. means "not detected."

Century Testing
Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-3,4,5,6 COMP SEMI-VOLATILES

CONSTITUENT	SAMPLE CONC.*	DETECTION LIMIT	UNITS
2-CHLORONAPHTHALENE	N.D.	100	ug/kg
2-NITROANILINE	N.D.	100	ug/kg
DIMETHYL PHTHALATE	N.D.	100	ug/kg
ACENAPHTHYLENE	N.D.	100	ug/kg
3-NITROANILINE	N.D.	100	ug/kg
ACENAPHTHENE	N.D.	100	ug/kg
2,4-DINITROPHENOL	N.D.	100	ug/kg
4-NITROPHENOL	N.D.	100	ug/kg
DIBENZOFURAN	N.D.	100	ug/kg
2,4-DINITROTOLUENE	N.D.	100	ug/kg
2,6-DINITROTOLUENE	N.D.	100	ug/kg
DIETHYLPHTHALATE	N.D.	100	ug/kg
4-CHLOROPHENYL-PHENYLETHER	N.D.	100	ug/kg
FLUORENE	N.D.	100	ug/kg
4-NITROANILINE	N.D.	100	ug/kg
4,6-DINITRO-2-METHYLPHENOL	N.D.	100	ug/kg
N-NITROSODIPHENYLAMINE	N.D.	100	ug/kg
4-BROMOPHENYL-PHENYLETHER	N.D.	100	ug/kg
HEXACHLOROBENZENE	N.D.	100	ug/kg
PENTACHLOROPHENOL	N.D.	100	ug/kg
PHENANTHRENE	380	100	ug/kg
ANTHRACENE	N.D.	100	ug/kg
DI-N-BUTYLPHTHALATE	1200	100	ug/kg
FLUORANTHENE	N.D.	100	ug/kg
BENZIDINE	N.D.	100	ug/kg
PYRENE	N.D.	100	ug/kg
BUTYLBENZYLPHTHALATE	N.D.	100	ug/kg
3,3'-DICHLOROBENZIDINE	N.D.	100	ug/kg
BENZO(A)ANTHRACENE	N.D.	100	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	4500	100	ug/kg
CHRYSENE	N.D.	100	ug/kg
DI-N-OCTYL PHTHALATE	N.D.	100	ug/kg
BENZO(B)FLUORANTHENE	N.D.	100	ug/kg
BENZO(K)FLUORANTHENE	N.D.	100	ug/kg
BENZO(A)PYRENE	N.D.	100	ug/kg
INDENO(1,2,3-CD)PYRENE	N.D.	100	ug/kg
DIBENZ(A,H)ANTHRACENE	N.D.	100	ug/kg
BENZO(G,H,I)PERYLENE	N.D.	100	ug/kg

*N.D. means "not detected."

Century Testing Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
CTL 6849-3,4,5,6 COMP SEMI-VOLATILES

OTHER COMPOUNDS FOUND	ESTIMATED CONCENTRATION
1-DOTRIACONTANOL	8200 mg/kg
1-DOTRIACONTANOL	2200 mg/kg
1-DOTRIACONTANOL	2400 mg/kg
1-DOTRIACONTANOL	2000 mg/kg
1-DOTRIACONTANOL	3300 mg/kg
1-DOTRIACONTANOL	1500 mg/kg
1-DOTRIACONTANOL	8500 mg/kg
1-DOTRIACONTANOL	11000 mg/kg
1-DOTRIACONTANOL	7500 mg/kg
1-DOTRIACONTANOL	11000 mg/kg
1-DOTRIACONTANOL	8300 mg/kg
1-DOTRIACONTANOL	7700 mg/kg
UNKNOWN	5300 mg/kg

COMPOUNDS ADDED FOR RECOVERY TESTING	PERCENT RECOVERY*
2-FLUOROPHENOL (SURROGATE SPIKE)	64%
PHENOL-D5 (SURROGATE SPIKE)	63%
NITROBENZENE-D5 (SURROGATE SPIKE)	51%
2-FLUOROBIPHENYL (SURROGATE SPIKE)	46%
2,4,6-TRIBROMOPHENOL (SURROGATE SPIKE)	33%
P-TERPHENYL-D14 (SURROGATE SPIKE)	Not found**

*Percent Recovery values were within established control limits. ALL

**Matrix interference

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/04/91

Century Testing Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

LABORATORY ANALYSIS

OIL AND GREASE

TOG

CWEC - DUBLIN
J. LINN SOIL EXCAVATION
PROJECT #2050700101

ANALYSIS METHOD:	EPA 503
MATRIX:	SOIL
DATE SUBMITTED:	1/25/91
DATE EXTRACTED:	1/28/91
DATE ANALYZED:	1/29/91
DISCARD DATE:	3/25/91
COLLECTED BY:	JIM GRIBI
DETECTION LIMIT:	0.04 mg/l

LAB SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE CONC.	UNITS
6849-3}	SS-3.1}		
6849-4}	SS-3.2}		
6849-5}	SS-3.3} COMP	12000	mg/kg
6849-6}	SS-3.4}		

Percent Recovery value generated from laboratory control samples is 111%.

Percent Recovery values were within established control limits. Cw

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

John H. Tillman

John H. Tillman, R.E.P. #2639
Manager Analytical Services

JHT/gs

02/04/91

CENTURY TESTING LABORATORIES

1444 NW College Way / Bend, Oregon 97701
(503) 382-6432 / (800) 458-9672 / Fax: (503) 382-6432

CHAIN OF CUSTODY RECORD

1. PROJ. NO.	2. PROJECT NAME & ADDRESS
20507-001-01	Johnny Lin Soil Excavation

3. SAMPLERS: (SIGNATURE) James C. Gribi

4. STA. NO.	5. DATE	6. TIME	7. COMPOSITE	8. GRAB	9. STATION LOCATION	10. NO. OF CONTAINERS	11. ANALYSIS TO BE PERFORMED: TPH-G – LUFT	TPH-D – LUFT	Semi-Vol. 8270	BTXE	Chl. HC 8240	TOG		CWEC LAB SAMPLE NO.	12. REMARKS
SS-1						1	X	X	X	X	X				
SS-2						1	X	X	X	X	X				
SS-3.1						1									
SS-3.2					C-1 – Composite	1	X	X	X	X	X	X			
SS-3.3															3 Samples – 2 Single Sample tubes & 1 composite of Four tubes
SS-3.4															
															Two-Week Turn-around
															DATE/TIME SAMPLED – not on COC. JG. 1-25-91

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)
James C. Gribi	1/24 5:10				
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY (SIGNATURE)
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	16. RECEIVED FOR LABORATORY BY:	17. DATE/TIME	18. REMARKS	
		Jork	1/25/91 11:15	call JIM GRIBI @ CWE Dublin W? & results 415/551-7774	

APPENDIX C

LABORTORY DATA REPORTS
BIOREMEDIATION PAD SAMPLES

CENTURY TESTING LABORATORIES

March 26, 1991

CWEC - Dublin
Johnny Lin
Project #2050700101

RE: Laboratory Log #7241

Century Testing Laboratories is pleased to provide you with our report for the analysis you requested. Enclosed are the results for your samples which were received on March 21, 1991.

Should you require additional Technical Explanation, please do not hesitate to contact Dr. Mel Lindbeck, Technical Manager. For questions concerning QA/QC, please contact Bruce Bale, Quality Assurance Manager. Questions pertaining specifically to Water Testing should be directed to our Water Operations Specialist, Mary Howell, based in our Portland office. To request additional Sample Containers and Coolers, please contact our Sample Custodians, Lisa York or Teresa Griggs. To inquire about Sample Status or if you need help with Sample Scheduling, please contact Bob Hart, Production Supervisor. Questions concerning Invoices should be directed to Gari Jaeger.

Thank you for selecting Century Testing for your analytical testing needs. We look forward to serving you again.

Sincerely,

CENTURY TESTING LABORATORIES, INC.

Christine Moehl

Christine Moehl
Data Validation Specialist

Enclosure

1444 NW College Way • P.O. Box 1174 • Bend, Oregon 97701
(503) 382-6432 • **(800) 458-9672** • Fax: (503) 382-6432

825 N.E. Multnomah, Suite 425 • Portland, Oregon 97232
(503) 231-6078 • Fax: (503) 231-6482

Century Testing
Laboratories, Inc.

Mail: Post Office Box 1174
Bend, Oregon 97709
503-382-6432

LABORATORY ANALYSIS

TOTAL OIL AND GREASE

CWEC - DUBLIN
JOHNNY LIN
PROJECT #2050700101

ANALYSIS METHOD: EPA 503
MATRIX: SOIL
DATE SUBMITTED: 3/21/91
DATE EXTRACTED: 3/22/91
DATE ANALYZED: 3/22/91
COLLECTED BY: J. GRIBI
METHOD DETECTION LIMIT: 2.5 mg/kg

LAB SAMPLE NUMBER	SAMPLE DESCRIPTION		SAMPLE CONC.*	UNITS
7241-1	SS-4-1}			
7241-2	SS-4-2}			
7241-3	SS-4-3}	COMP	5300	mg/kg
7241-4	SS-4-4}			

*N.D. means "not detected."

Percent Recovery value generated from laboratory control samples is 94%.

Percent Recovery values were within established control limits.

CENTURY TESTING LABORATORIES, INC.

Reviewed and approved by:

Christine Moehl

Christine Moehl
Data Validation Specialist

03/26/91

CENTURY TESTING LABORATORIES

1444 NW College Way / Bend, Oregon 97701
(503) 382-6432 / (800) 458-9672 / Fax: (503) 382-6432

CHAIN OF CUSTODY RECORD

1. PROJ. NO.	2. PROJECT NAME & ADDRESS
20507-001-01	Johnny Lin

3. SAMPLERS: (SIGNATURE) James [signature] / CWEC Dublin

10. NO. OF CONTAINERS

11. ANALYSIS TO BE PERFORMED: TOG (EPA 503)

CWEC LAB SAMPLE NO.

4. STA. NO.	5. DATE	6. TIME	7. COMPOSITE	8. GRAB	9. STATION LOCATION	10. NO. OF CONTAINERS	TOG (EPA 503)						CWEC LAB SAMPLE NO.	12. REMARKS
SS-4.1	3/15													
SS-4.2					Composite into one		X							2-week TAT
SS-4.3														
SS-4.4														
														Call Jim Gribi @ 415/551-7774 w/ questions & results

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)
[signature]	3/20 5:10				

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY (SIGNATURE)

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	16. RECEIVED FOR LABORATORY BY:	17. DATE/TIME	18. REMARKS
		[signature]	3/21/91 1100	

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 07-16-91
NET Client Acct. No: 753
NET Pacific Log No: 8398
Received: 06-29-91 0800

Client Reference Information

Johnny Lin/San Leandro, Project: 20507-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

NET Pacific, Inc.

Client Acct: 753 Date: 07-16-91
Client Name: Century West Engineering Page: 2
NET Log No: 8398

Ref: Johnny Lin/San Leandro, Project: 20507-001-01

SAMPLE DESCRIPTION: SS-5.1-4 06-27-91 1630
LAB Job No: (-90184)

Parameter	Method	Reporting Limit	Results	Units
Oil & Grease(Total)	EPA9071	50	6,400	mg/Kg
Oil & Grease(Non-Polar)	SM5520EF	50	4,500	mg/Kg

NET Pacific, Inc.

Client Acct: 753
Client Name: Century West Engineering
NET Log No: 8398

Date: 07-16-91
Page: 3

Ref: Johnny Lin/San Leandro, Project: 20507-001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
O & G(Total)	50	mg/Kg	101	ND	98	101	3
O & G(Non-P)	50	mg/Kg	89	ND	94	93	1.1

NET Pacific, Inc.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

CENTURY TESTING LABORATORIES

CHAIN OF CUSTODY RECORD

1444 NW College Way / Bend, Oregon 97701
(503) 382-6432 / (800) 458-9672 / Fax: (503) 382-6432

8398

1. PROJ. NO.	2. PROJECT NAME & ADDRESS
20507-001-01	JOHNNY LIN / SAN LEANDRO

3. SAMPLERS: (SIGNATURE) / JIM GRIBI

4. STA. NO.	5. DATE	6. TIME	7. COMPOSITE	8. GRAB	9. STATION LOCATION	10. NO. OF CONTAINERS	11. ANALYSIS TO BE PERFORMED: Oil & Grease (EPA 503)	CWEC LAB SAMPLE NO.	12. REMARKS
SS-5.1	6/27	4:30			Composite	1			
SS-5.2	"	"				1	X		2-week TAT
SS-5.3	"	"				1			
SS-5.4	"	"				1			Fax results to Jim Gribi @ 415/551-7776 Phone: 415/551-7774

CUSTODY SEALED 6/28/91 @ 1200 MWW

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/ TIME	15. RECEIVED BY: (SIGNATURE)
	6/28 11:30			6/28/91	
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY (SIGNATURE)
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	16. RECEIVED FOR LABORATORY BY:	17. DATE/TIME	18. REMARKS	
(ACCS)			6/29/91 0800		

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 10-23-91
NET Client Acct. No: 753
NET Pacific Log No: 1230
Received: 10-04-91 0800

Client Reference Information

Johnny Linn, Project: 20507-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

CENTURY TESTING LABORATORIES

CHAIN OF CUSTODY RECORD

1444 NW College Way / Bend, Oregon 97701
(503) 382-6432 / (800) 458-9672 / Fax: (503) 382-6432

grab) pm JG to LD 10/4/91 4r

1230

1. PROJ. NO.	2. PROJECT NAME & ADDRESS	10. NO. OF CONTAINERS	11. ANALYSIS TO BE PERFORMED: TOG (NP only by grab)	CWEC LAB SAMPLE NO.	12. REMARKS
20502-001-01	James Gill & Jim Grib				
3. ~~SAMPLERS~~ (SIGNATURE): Johnny Linn					

4. STA. NO.	5. DATE	6. TIME	7. COMPOSITE	8. GRAB	9. STATION LOCATION								
SS-6.1	10/3				Composite		X						2-week TAT
SS-6.2													
SS-6.3													
SS-6.4													

CUSTODY SEALED 10/3/91 @ 19:00 J.W. and intact

13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/ TIME	15. RECEIVED BY: (SIGNATURE)
James Gill	10/3/91 2:15			10/3 19:00	
13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY: (SIGNATURE)	13. RELINQUISHED BY: (SIGNATURE)	14. DATE/TIME	15. RECEIVED BY (SIGNATURE)
13. RELINQUISHED BY: (SIGNATURE) (VIA NCS)	14. DATE/TIME	16. RECEIVED FOR LABORATORY BY:	17. DATE/TIME	18. REMARKS	
			10/4/91 0800		

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 07/28/1993
NET Client Acct. No: 75300
NET Pacific Job No: 93.02967
Received: 07/10/1993

Client Reference Information

Johnny Lin/Lewelling, Project No: 20507.001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: Johnny Lin/Lewelling, Project No: 20507.001-01

SAMPLE DESCRIPTION: SS-7.1,7.2,7.3,7.4 comp
Date Taken: 07/09/1993
Time Taken:
NET Sample No: 165914

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Oil & Grease (Total)	2,200		50	mg/kg	5520E		07/13/1993
Oil & Grease (Non-Polar)	1,200		50	mg/kg	5520E/F		07/13/1993

Ref: Johnny Lin/Lewelling, Project No: 20507.001-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
O&G,total	50	mg/Kg	95.1	ND	98.5	98.7	0.2
O&G,non-polar	50	mg/Kg	78.2	ND	98.4	98.7	0.3

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

NET NATIONAL ENVIRONMENTAL TESTING, INC.

SANTA ROSA DIVISION, 435 TESCONI CIRCLE, SANTA ROSA, CA 95401
(707) 526-7200 PHONE (707) 526-9623 FAX

4585

CHAIN OF CUSTODY RECORD

COMPANY Century West Engineering
ADDRESS 7950 Dublin Blvd., Dub. Ca.
PHONE (510) 551-7774 FAX
PROJECT NAME/LOCATION Johnny Lin / Lowell Ave
PROJECT NUMBER 20507001-01
PROJECT MANAGER J. GRIBI

SAMPLED BY BOB BOGAR (PRINT NAME) Bob Bogar (SIGNATURE)
(PRINT NAME) (SIGNATURE)

ANALYSES

TURNAROUND TIME 10 DAY (S)

DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS	MATRIX	PRESERVED Y/N	TOG 5520 E&F B&F	COMMENTS
7/9		SS-7.1	X		1	SOIL	Y	X	COMPOSITE
7/9		SS-7.2	X		1	"	"		
7/9		SS-7.3	X		1	"	"		
7/9		SS-7.4	X		1	"	"		

CUSTODY SEALED 7/9/93 @ 1605 Bob (seal intact)

RESULTS TO:

INVOICE TO:

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
Bob Bogar	7/9/93 1532 pm	Betty Harvey 7/9/93 1521	Betty Harvey	7/9/93 1605	
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR LABORATORY BY:
				7/10/93 1100	

METHOD OF SHIPMENT: NCS

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Gribi
Century West Engineering
7950 Dublin Blvd., Ste 210
Dublin, CA 94568

Date: 12/17/1993
NET Client Acct. No: 75300
NET Pacific Job No: 93.05034
Received: 11/17/1993

Client Reference Information

Johnny Lin, Project No: 20507-001-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager for:

Enclosure(s)

Ref: Johnny Lin, Project No: 20507-001-01

SAMPLE DESCRIPTION: SP-2.1,2.2,2.3,2.4 comp
Date Taken: 11/16/1993
Time Taken:
NET Sample No: 178798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Soil pH measured in water	7.4		N/A	pH units	9040		11/20/1993
Flashpoint/Ignitability	>140		N/A	Degree F	1010		11/18/1993
Sulfide	68		10	mg/kg	376.1		11/18/1993
Cyanide (Total)	0.9		0.2	mg/kg	335.2		11/24/1993
ICP METALS SOLID	--						11/23/1993
Antimony (ICP)	ND		10	mg/kg	EPA 6010	11/19/1993	11/23/1993
Arsenic (GFAA)	2.1		0.5	mg/kg	EPA 7060	11/21/1993	11/24/1993
Barium (ICP)	98		2.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Beryllium (ICP)	ND		2.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Cadmium (ICP)	ND		2.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Chromium (ICP)	36		2.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Chromium+6 (FLAA)	ND	CNA	2.0	mg/kg	EPA 7197		
Cobalt (ICP)	8.7		5.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Copper (ICP)	45		2.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Lead (GFAA)	35		0.2	mg/kg	EPA 7421	11/21/1993	11/24/1993
Mercury (CVAA)	0.5		0.1	mg/kg	EPA 7471	11/29/1993	11/29/1993
Molybdenum (ICP)	ND		5.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Nickel (ICP)	38		5.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Selenium (GFAA)	ND	NI3	0.5	mg/kg	EPA 7740	11/21/1993	11/29/1993
Silver (ICP)	3.4		2.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Thallium (ICP)	ND		20	mg/kg	EPA 6010	11/19/1993	11/23/1993
Vanadium (ICP)	22		5.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
Zinc (ICP)	110		5.0	mg/kg	EPA 6010	11/19/1993	11/23/1993
ICP METALS WET							
Antimony (ICP, WET)	ND		1.0	mg/L	EPA 6010	12/04/1993	12/14/1993
Beryllium (ICP, WET)	ND		0.1	mg/L	EPA 6010	12/04/1993	12/14/1993
Lead (GFAA,WET)	1.8		0.01	mg/L	EPA 7421	12/04/1993	12/10/1993
Mercury (CVAA,WET)	ND		0.005	mg/L	EPA 7470	12/07/1993	12/08/1993
Thallium (GFAA,WET)	ND		0.05	mg/L	EPA 7841	12/04/1993	12/09/1993
METHOD 3550/M8015						11/18/1993	
DILUTION FACTOR*	20						11/29/1993
as Motor Oil	800		200	mg/kg	3550		11/29/1993

CNA : Cr+6 not analyzed; Total Chromium conc. below Cr+6 regulatory level.
NI3 : Matrix Spikes out of control, Matrix Interference suspected.

Ref: Johnny Lin, Project No: 20507-001-01

SAMPLE DESCRIPTION: SP-2.1,2.2,2.3,2.4 comp
Date Taken: 11/16/1993
Time Taken:
NET Sample No: 178798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8240 (GCMS,Solid)							
DILUTION FACTOR*	1						11/29/1993
Benzene	ND		5.0	ug/kg	8240		11/29/1993
Acetone	ND		25	ug/kg	8240		11/29/1993
Bromodichloromethane	ND		5.0	ug/kg	8240		11/29/1993
Bromoform	ND		5.0	ug/kg	8240		11/29/1993
Bromomethane	ND		5.0	ug/kg	8240		11/29/1993
2-Butanone	ND		10	ug/kg	8240		11/29/1993
Carbon disulfide	ND		5.0	ug/kg	8240		11/29/1993
Carbon tetrachloride	ND		5.0	ug/kg	8240		11/29/1993
Chlorobenzene	ND		5.0	ug/kg	8240		11/29/1993
Chloroethane	ND		5.0	ug/kg	8240		11/29/1993
2-Chloroethyl vinyl ether	ND		10	ug/kg	8240		11/29/1993
Chloroform	ND		5.0	ug/kg	8240		11/29/1993
Chloromethane	ND		5.0	ug/kg	8240		11/29/1993
Dibromochloromethane	ND		5.0	ug/kg	8240		11/29/1993
1,2-Dichlorobenzene	ND		5.0	ug/kg	8240		11/29/1993
1,3-Dichlorobenzene	ND		5.0	ug/kg	8240		11/29/1993
1,4-Dichlorobenzene	ND		5.0	ug/kg	8240		11/29/1993
1,1-Dichloroethane	ND		5.0	ug/kg	8240		11/29/1993
1,2-Dichloroethane	ND		5.0	ug/kg	8240		11/29/1993
1,1-Dichloroethene	ND		5.0	ug/kg	8240		11/29/1993
trans-1,2-Dichloroethene	ND		5.0	ug/kg	8240		11/29/1993
1,2-Dichloropropane	ND		5.0	ug/kg	8240		11/29/1993
cis-1,3-Dichloropropene	ND		5.0	ug/kg	8240		11/29/1993
trans-1,3-Dichloropropene	ND		5.0	ug/kg	8240		11/29/1993
Ethyl benzene	ND		5.0	ug/kg	8240		11/29/1993
2-Hexanone	ND		10	ug/kg	8240		11/29/1993
Methylene chloride	ND		25	ug/kg	8240		11/29/1993
4-Methyl-2-pentanone	ND		10	ug/kg	8240		11/29/1993
Styrene	ND		5.0	ug/kg	8240		11/29/1993
1,1,2,2-Tetrachloroethane	ND		5.0	ug/kg	8240		11/29/1993
Tetrachloroethene	ND		5.0	ug/kg	8240		11/29/1993
Toluene	ND		5.0	ug/kg	8240		11/29/1993
1,1,1-Trichloroethane	ND		5.0	ug/kg	8240		11/29/1993
1,1,2-Trichloroethane	ND		5.0	ug/kg	8240		11/29/1993
Trichloroethene	ND		5.0	ug/kg	8240		11/29/1993
Trichlorofluoromethane	ND		5.0	ug/kg	8240		11/29/1993
Vinyl acetate	ND		10	ug/kg	8240		11/29/1993
Vinyl chloride	ND		5.0	ug/kg	8240		11/29/1993
Xylenes (total)	ND		5.0	ug/kg	8240		11/29/1993
SURROGATE RESULTS	--						11/29/1993

Ref: Johnny Lin, Project No: 20507-001-01

SAMPLE DESCRIPTION: SP-2.1,2.2,2.3,2.4 comp
Date Taken: 11/16/1993
Time Taken:
NET Sample No: 178798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Toluene-d8 (SURR)	115			% Rec.	8240		11/29/1993
Bromofluorobenzene (SURR)	90			% Rec.	8240		11/29/1993
1,2-Dichloroethane-d4 (SURR)	96			% Rec.	8240		11/29/1993

Ref: Johnny Lin, Project No: 20507-001-01

SAMPLE DESCRIPTION: SP-2.1,2.2,2.3,2.4 comp
Date Taken: 11/16/1993
Time Taken:
NET Sample No: 178798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8270(GCMS,Solid)						11/22/1993	
DILUTION FACTOR*	1						11/23/1993
Acenaphthene	ND		330	ug/kg	8270		11/23/1993
Acenaphthylene	ND		330	ug/kg	8270		11/23/1993
Aldrin	ND		1600	ug/kg	8270		11/23/1993
Anthracene	ND		330	ug/kg	8270		11/23/1993
Benzidine	ND		1600	ug/kg	8270		11/23/1993
Benzo(a)anthracene	ND		330	ug/kg	8270		11/23/1993
Benzo(b)fluoranthene	ND		330	ug/kg	8270		11/23/1993
Benzo(k)fluoranthene	ND		330	ug/kg	8270		11/23/1993
Benzo(a)pyrene	ND		330	ug/kg	8270		11/23/1993
Benzo(g,h,i)perylene	ND		330	ug/kg	8270		11/23/1993
Benzoic acid	ND		1600	ug/kg	8270		11/23/1993
Benyzl alcohol	ND		330	ug/kg	8270		11/23/1993
Butyl benzyl phthalate	ND		330	ug/kg	8270		11/23/1993
delta-BHC	ND		1600	ug/kg	8270		11/23/1993
gamma-BHC	ND		1600	ug/kg	8270		11/23/1993
bis(2-Chloroethyl)ether	ND		330	ug/kg	8270		11/23/1993
bis(2-Chloroethoxy)methane	ND		330	ug/kg	8270		11/23/1993
bis(2-Chloroisopropyl)ether	ND		330	ug/kg	8270		11/23/1993
bis(2-Ethylhexyl)phthalate	ND		330	ug/kg	8270		11/23/1993
4-Bromophenyl phenyl ether	ND		330	ug/kg	8270		11/23/1993
4-Chloroanaline	ND		330	ug/kg	8270		11/23/1993
2-Chloronaphthalene	ND		330	ug/kg	8270		11/23/1993
4-Chlorophenyl phenyl ether	ND		330	ug/kg	8270		11/23/1993
Chrysene	ND		330	ug/kg	8270		11/23/1993
4,4'-DDD	ND		1600	ug/kg	8270		11/23/1993
4,4'-DDE	ND		1600	ug/kg	8270		11/23/1993
4,4'-DDT	ND		1600	ug/kg	8270		11/23/1993
Dibenzo(a,h)anthracene	ND		330	ug/kg	8270		11/23/1993
Dibenzofuran	ND		330	ug/kg	8270		11/23/1993
Di-n-butylphthalate	ND		330	ug/kg	8270		11/23/1993
1,2-Dichlorobenzene	ND		330	ug/kg	8270		11/23/1993
1,3-Dichlorobenzene	ND		330	ug/kg	8270		11/23/1993
1,4-Dichlorobenzene	ND		330	ug/kg	8270		11/23/1993
3,3'-Dichlorobenzidine	ND		660	ug/kg	8270		11/23/1993
Dieldrin	ND		1600	ug/kg	8270		11/23/1993
Diethylphthalate	ND		330	ug/kg	8270		11/23/1993
Dimethyl phthalate	ND		330	ug/kg	8270		11/23/1993
2,4-Dinitrotoluene	ND		330	ug/kg	8270		11/23/1993
2,6-Dinitrotoluene	ND		330	ug/kg	8270		11/23/1993
Di-n-octyl phthalate	ND		330	ug/kg	8270		11/23/1993

Ref: Johnny Lin, Project No: 20507-001-01

SAMPLE DESCRIPTION: SP-2.1,2.2,2.3,2.4 comp
Date Taken: 11/16/1993
Time Taken:
NET Sample No: 178798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Endrin aldehyde	ND		1600	ug/kg	8270		11/23/1993
Fluoranthene	ND		330	ug/kg	8270		11/23/1993
Fluorene	ND		330	ug/kg	8270		11/23/1993
Heptachlor	ND		1600	ug/kg	8270		11/23/1993
Heptachlor epoxide	ND		1600	ug/kg	8270		11/23/1993
Hexachlorobenzene	ND		330	ug/kg	8270		11/23/1993
Hexachlorobutadiene	ND		330	ug/kg	8270		11/23/1993
Hexachlorocyclopentadiene	ND		330	ug/kg	8270		11/23/1993
Hexachloroethane	ND		330	ug/kg	8270		11/23/1993
Indeno(1,2,3-cd)pyrene	ND		330	ug/kg	8270		11/23/1993
Isophorone	ND		330	ug/kg	8270		11/23/1993
2-Methylnaphthalene	ND		330	ug/kg	8270		11/23/1993
Naphthalene	ND		330	ug/kg	8270		11/23/1993
2-Nitroaniline	ND		1600	ug/kg	8270		11/23/1993
3-Nitroaniline	ND		1600	ug/kg	8270		11/23/1993
4-Nitroaniline	ND		1600	ug/kg	8270		11/23/1993
Nitrobenzene	ND		330	ug/kg	8270		11/23/1993
N-Nitroso-Di-N-propylamine	ND		330	ug/kg	8270		11/23/1993
N-Nitrosodiphenylamine	ND		330	ug/kg	8270		11/23/1993
Phenanthrene	ND		330	ug/kg	8270		11/23/1993
Pyrene	ND		330	ug/kg	8270		11/23/1993
1,2,4-Trichlorobenzene	ND		330	ug/kg	8270		11/23/1993
ACID EXTRACTABLES	--						11/23/1993
4-Chloro-3-methylphenol	ND		330	ug/kg	8270		11/23/1993
2-Chlorophenol	ND		330	ug/kg	8270		11/23/1993
2,4-Dichlorophenol	ND		330	ug/kg	8270		11/23/1993
2,4-Dimethylphenol	ND		330	ug/kg	8270		11/23/1993
2,4-Dinitrophenol	ND		1600	ug/kg	8270		11/23/1993
4,6-Dinitro-2-methylphenol	ND		1600	ug/kg	8270		11/23/1993
2-Nitrophenol	ND		330	ug/kg	8270		11/23/1993
4-Nitrophenol	ND		1600	ug/kg	8270		11/23/1993
Pentachlorophenol	ND		1600	ug/kg	8270		11/23/1993
Phenol	ND		330	ug/kg	8270		11/23/1993
2,4,6-Trichlorophenol	ND		330	ug/kg	8270		11/23/1993
2-Methylphenol	ND		330	ug/kg	8270		11/23/1993
4-Methylphenol	ND		330	ug/kg	8270		11/23/1993
2,4,5-Trichlorophenol	ND		1600	ug/kg	8270		11/23/1993
SURROGATE RESULTS	--						11/23/1993
Nitrobenzene-d5 (SURR)	48			% Rec.	8270		11/23/1993
2-Fluorobiphenyl (SURR)	69			% Rec.	8270		11/23/1993
p-Terphenyl-d14 (SURR)	49			% Rec.	8270		11/23/1993
Phenol-d5 (SURR)	52			% Rec.	8270		11/23/1993

Ref: Johnny Lin, Project No: 20507-001-01

SAMPLE DESCRIPTION: SP-2.1,2.2,2.3,2.4 comp
Date Taken: 11/16/1993
Time Taken:
NET Sample No: 178798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
2-Fluorophenol (SURR)	45			% Rec.	8270		11/23/1993
2,4,6-Tribromophenol (SURR)	70			% Rec.	8270		11/23/1993

Ref: Johnny Lin, Project No: 20507-001-01

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
Soil pH measured in water	99.6	6.97	7.00	pH units	11/20/1993	bbh
Cyanide (Total)	102.7	0.308	0.30	mg/kg	11/24/1993	mee
Cyanide (Total)	104.0	0.104	0.10	mg/kg	11/24/1993	mee
ICP METALS SOLID		--			11/23/1993	jeo
Antimony (ICP)	99.3	0.99266	1.00	mg/kg	11/23/1993	jeo
Arsenic (GFAA)	101.6	0.0508	0.0500	mg/kg	11/24/1993	djm
Barium (ICP)	98.2	0.9816	1.00	mg/kg	11/23/1993	jeo
Beryllium (ICP)	99.0	0.9898	1.00	mg/kg	11/23/1993	jeo
Cadmium (ICP)	98.2	0.9816	1.00	mg/kg	11/23/1993	jeo
Chromium (ICP)	99.9	0.999	1.00	mg/kg	11/23/1993	jeo
Cobalt (ICP)	98.9	0.9892	1.00	mg/kg	11/23/1993	jeo
Copper (ICP)	98.9	0.9893	1.00	mg/kg	11/23/1993	jeo
Lead (GFAA)	93.6	0.0234	0.0250	mg/kg	11/24/1993	djm
Mercury (CVAA)	91.5	0.00366	0.00400	mg/kg	11/29/1993	ket
Molybdenum (ICP)	106.6	1.066	1.00	mg/kg	11/23/1993	jeo
Nickel (ICP)	99.3	0.993	1.00	mg/kg	11/23/1993	jeo
Selenium (GFAA)	104.0	0.0260	0.0250	mg/kg	11/29/1993	djm
Silver (ICP)	95.9	0.9589	1.00	mg/kg	11/23/1993	jeo
Thallium (ICP)	99.0	0.99031	1.00	mg/kg	11/23/1993	jeo
Vanadium (ICP)	98.2	0.9815	1.00	mg/kg	11/23/1993	jeo
Zinc (ICP)	97.3	0.973	1.00	mg/kg	11/23/1993	jeo
ICP METALS WET						
Antimony (ICP, WET)	94.4	9.44	10.0	mg/L	12/14/1993	jeo
Beryllium (ICP, WET)	94.5	0.945	1.00	mg/L	12/14/1993	jeo
Lead (GFAA,WET)	98.4	0.0246	0.0250	mg/L	12/14/1993	djm
Mercury (CVAA,WET)	85.5	0.00342	0.00400	mg/L	12/08/1993	ket
Thallium (GFAA,WET)	102.8	0.0514	0.0500	mg/L	12/09/1993	djm
METHOD 3550/M8015						
as Motor Oil	96.0	960	1000	mg/kg	11/23/1993	dkb
METHOD 8240(GCMS,Solid)						
Chloroform	97.8	48.9	50.0	ug/kg	11/29/1993	jes
1,1-Dichloroethene	103.6	51.8	50.0	ug/kg	11/29/1993	jes
1,2-Dichloropropane	100.0	50.0	50.0	ug/kg	11/29/1993	jes
Ethyl benzene	98.2	49.1	50.0	ug/kg	11/29/1993	jes
Toluene	96.0	48.0	50.0	ug/kg	11/29/1993	jes
Vinyl chloride	105.2	52.6	50.0	ug/kg	11/29/1993	jes
Toluene-d8 (SURR)	99.0	99	100	% Rec.	11/29/1993	jes
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	11/29/1993	jes
1,2-Dichloroethane-d4 (SURR)	100.0	100	100	% Rec.	11/29/1993	jes
METHOD 8270(GCMS,Solid)						
Acenaphthene	97.0	48.5	50.0	ug/kg	11/23/1993	sjg
Benzo(a)pyrene	97.0	48.5	50.0	ug/kg	11/23/1993	sjg
1,4-Dichlorobenzene	104.0	52.0	50.0	ug/kg	11/23/1993	sjg
Di-n-octyl phthalate	100.0	50.0	50.0	ug/kg	11/23/1993	sjg
Fluoranthene	104.0	52.0	50.0	ug/kg	11/23/1993	sjg
Hexachlorobutadiene	104.0	52.0	50.0	ug/kg	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
N-Nitrosodiphenylamine	112.0	56.0	50.0	ug/kg	11/23/1993	sjg
4-Chloro-3-methylphenol	101.0	50.5	50.0	ug/kg	11/23/1993	sjg
2,4-Dichlorophenol	99.0	49.5	50.0	ug/kg	11/23/1993	sjg
2-Nitrophenol	104.0	52.0	50.0	ug/kg	11/23/1993	sjg
Pentachlorophenol	130.0	65.0	50.0	ug/kg	11/23/1993	sjg
Phenol	102.0	51.0	50.0	ug/kg	11/23/1993	sjg
2,4,6-Trichlorophenol	113.0	56.5	50.0	ug/kg	11/23/1993	sjg
Nitrobenzene-d5 (SURR)	100.0	100	100	% Rec.	11/23/1993	sjg
2-Fluorobiphenyl (SURR)	104.0	104	100	% Rec.	11/23/1993	sjg
p-Terphenyl-d14 (SURR)	102.0	102	100	% Rec.	11/23/1993	sjg
Phenol-d5 (SURR)	107.0	107	100	% Rec.	11/23/1993	sjg
2-Fluorophenol (SURR)	108.0	108	100	% Rec.	11/23/1993	sjg
2,4,6-Tribromophenol (SURR)	104.0	104	100	% Rec.	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Carbon disulfide	ND	5.0	ug/kg	11/29/1993	jes
Carbon tetrachloride	ND	5.0	ug/kg	11/29/1993	jes
Chlorobenzene	ND	5.0	ug/kg	11/29/1993	jes
Chloroethane	ND	5.0	ug/kg	11/29/1993	jes
2-Chloroethyl vinyl ether	ND	10	ug/kg	11/29/1993	jes
Chloroform	ND	5.0	ug/kg	11/29/1993	jes
Chloromethane	ND	5.0	ug/kg	11/29/1993	jes
Dibromochloromethane	ND	5.0	ug/kg	11/29/1993	jes
1,2-Dichlorobenzene	ND	5.0	ug/kg	11/29/1993	jes
1,3-Dichlorobenzene	ND	5.0	ug/kg	11/29/1993	jes
1,4-Dichlorobenzene	ND	5.0	ug/kg	11/29/1993	jes
1,1-Dichloroethane	ND	5.0	ug/kg	11/29/1993	jes
1,2-Dichloroethane	ND	5.0	ug/kg	11/29/1993	jes
1,1-Dichloroethene	ND	5.0	ug/kg	11/29/1993	jes
trans-1,2-Dichloroethene	ND	5.0	ug/kg	11/29/1993	jes
1,2-Dichloropropane	ND	5.0	ug/kg	11/29/1993	jes
cis-1,3-Dichloropropene	ND	5.0	ug/kg	11/29/1993	jes
trans-1,3-Dichloropropene	ND	5.0	ug/kg	11/29/1993	jes
Ethyl benzene	ND	5.0	ug/kg	11/29/1993	jes
2-Hexanone	ND	10	ug/kg	11/29/1993	jes
Methylene chloride	ND	25	ug/kg	11/29/1993	jes
4-Methyl-2-pentanone	ND	10	ug/kg	11/29/1993	jes
Styrene	ND	5.0	ug/kg	11/29/1993	jes
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	11/29/1993	jes
Tetrachloroethene	ND	5.0	ug/kg	11/29/1993	jes
Toluene	ND	5.0	ug/kg	11/29/1993	jes
1,1,1-Trichloroethane	ND	5.0	ug/kg	11/29/1993	jes
1,1,2-Trichloroethane	ND	5.0	ug/kg	11/29/1993	jes
Trichloroethene	ND	5.0	ug/kg	11/29/1993	jes
Trichlorofluoromethane	ND	5.0	ug/kg	11/29/1993	jes
Vinyl acetate	ND	10	ug/kg	11/29/1993	jes
Vinyl chloride	ND	5.0	ug/kg	11/29/1993	jes
Xylenes (total)	ND	5.0	ug/kg	11/29/1993	jes
Toluene-d8 (SURR)	105		% Rec.	11/29/1993	jes
Bromofluorobenzene (SURR)	97		% Rec.	11/29/1993	jes
1,2-Dichloroethane-d4 (SURR)	92		% Rec.	11/29/1993	jes
METHOD 8270(GCMS,Solid)					
Acenaphthene	ND	330	ug/kg	11/23/1993	sjg
Acenaphthylene	ND	330	ug/kg	11/23/1993	sjg
Aldrin	ND	1600	ug/kg	11/23/1993	sjg
Anthracene	ND	330	ug/kg	11/23/1993	sjg
Benzidine	ND	1600	ug/kg	11/23/1993	sjg
Benzo(a)anthracene	ND	330	ug/kg	11/23/1993	sjg
Benzo(b)fluoranthene	ND	330	ug/kg	11/23/1993	sjg
Benzo(k)fluoranthene	ND	330	ug/kg	11/23/1993	sjg
Benzo(a)pyrene	ND	330	ug/kg	11/23/1993	sjg
Benzo(g,h,i)perylene	ND	330	ug/kg	11/23/1993	sjg
Benzoic acid	ND	1600	ug/kg	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Benyzl alcohol	ND	330	ug/kg	11/23/1993	sjg
Butyl benzyl phthalate	ND	330	ug/kg	11/23/1993	sjg
delta-BHC	ND	1600	ug/kg	11/23/1993	sjg
gamma-BHC	ND	1600	ug/kg	11/23/1993	sjg
bis(2-Chloroethyl)ether	ND	330	ug/kg	11/23/1993	sjg
bis(2-Chloroethoxy)methane	ND	330	ug/kg	11/23/1993	sjg
bis(2-Chloroisopropyl)ether	ND	330	ug/kg	11/23/1993	sjg
bis(2-Ethylhexyl)phthalate	ND	330	ug/kg	11/23/1993	sjg
4-Bromophenyl phenyl ether	ND	330	ug/kg	11/23/1993	sjg
4-Chloroanaline	ND	330	ug/kg	11/23/1993	sjg
2-Chloronaphthalene	ND	330	ug/kg	11/23/1993	sjg
4-Chlorophenyl phenyl ether	ND	330	ug/kg	11/23/1993	sjg
Chrysene	ND	330	ug/kg	11/23/1993	sjg
4,4'-DDD	ND	1600	ug/kg	11/23/1993	sjg
4,4'-DDE	ND	1600	ug/kg	11/23/1993	sjg
4,4'-DDT	ND	1600	ug/kg	11/23/1993	sjg
Dibenzo(a,h)anthracene	ND	330	ug/kg	11/23/1993	sjg
Dibenzofuran	ND	330	ug/kg	11/23/1993	sjg
Di-n-butylphthalate	ND	330	ug/kg	11/23/1993	sjg
1,2-Dichlorobenzene	ND	330	ug/kg	11/23/1993	sjg
1,3-Dichlorobenzene	ND	330	ug/kg	11/23/1993	sjg
1,4-Dichlorobenzene	ND	330	ug/kg	11/23/1993	sjg
3,3'-Dichlorobenzidine	ND	660	ug/kg	11/23/1993	sjg
Dieldrin	ND	1600	ug/kg	11/23/1993	sjg
Diethylphthalate	ND	330	ug/kg	11/23/1993	sjg
Dimethyl phthalate	ND	330	ug/kg	11/23/1993	sjg
2,4-Dinitrotoluene	ND	330	ug/kg	11/23/1993	sjg
2,6-Dinitrotoluene	ND	330	ug/kg	11/23/1993	sjg
Di-n-octyl phthalate	ND	330	ug/kg	11/23/1993	sjg
Endrin aldehyde	ND	1600	ug/kg	11/23/1993	sjg
Fluoranthene	ND	330	ug/kg	11/23/1993	sjg
Fluorene	ND	330	ug/kg	11/23/1993	sjg
Heptachlor	ND	1600	ug/kg	11/23/1993	sjg
Heptachlor epoxide	ND	1600	ug/kg	11/23/1993	sjg
Hexachlorobenzene	ND	330	ug/kg	11/23/1993	sjg
Hexachlorobutadiene	ND	330	ug/kg	11/23/1993	sjg
Hexachlorocyclopentadiene	ND	330	ug/kg	11/23/1993	sjg
Hexachloroethane	ND	330	ug/kg	11/23/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	11/23/1993	sjg
Isophorone	ND	330	ug/kg	11/23/1993	sjg
2-Methylnaphthalene	ND	330	ug/kg	11/23/1993	sjg
Naphthalene	ND	330	ug/kg	11/23/1993	sjg
2-Nitroaniline	ND	1600	ug/kg	11/23/1993	sjg
3-Nitroaniline	ND	1600	ug/kg	11/23/1993	sjg
4-Nitroaniline	ND	1600	ug/kg	11/23/1993	sjg
Nitrobenzene	ND	330	ug/kg	11/23/1993	sjg
N-Nitroso-Di-N-propylamine	ND	330	ug/kg	11/23/1993	sjg
N-Nitrosodiphenylamine	ND	330	ug/kg	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Phenanthrene	ND	330	ug/kg	11/23/1993	sjg
Pyrene	ND	330	ug/kg	11/23/1993	sjg
1,2,4-Trichlorobenzene	ND	330	ug/kg	11/23/1993	sjg
4-Chloro-3-methylphenol	ND	330	ug/kg	11/23/1993	sjg
2-Chlorophenol	ND	330	ug/kg	11/23/1993	sjg
2,4-Dichlorophenol	ND	330	ug/kg	11/23/1993	sjg
2,4-Dimethylphenol	ND	330	ug/kg	11/23/1993	sjg
2,4-Dinitrophenol	ND	1600	ug/kg	11/23/1993	sjg
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	11/23/1993	sjg
2-Nitrophenol	ND	330	ug/kg	11/23/1993	sjg
4-Nitrophenol	ND	1600	ug/kg	11/23/1993	sjg
Pentachlorophenol	ND	1600	ug/kg	11/23/1993	sjg
Phenol	ND	330	ug/kg	11/23/1993	sjg
2,4,6-Trichlorophenol	ND	330	ug/kg	11/23/1993	sjg
2-Methylphenol	ND	330	ug/kg	11/23/1993	sjg
4-Methylphenol	ND	330	ug/kg	11/23/1993	sjg
2,4,5-Trichlorophenol	ND	1600	ug/kg	11/23/1993	sjg
Nitrobenzene-d5 (SURR)	73		% Rec.	11/23/1993	sjg
2-Fluorobiphenyl (SURR)	67		% Rec.	11/23/1993	sjg
p-Terphenyl-d14 (SURR)	80		% Rec.	11/23/1993	sjg
Phenol-d5 (SURR)	71		% Rec.	11/23/1993	sjg
2-Fluorophenol (SURR)	70		% Rec.	11/23/1993	sjg
2,4,6-Tribromophenol (SURR)	78		% Rec.	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Analyst Initials
Sulfide	81.5	83.3	2.2	150.9	68	191	198	mg/kg	11/18/1993	bbh
Cyanide (Total)	84.2	94.1	11.1	2.02	0.9	2.60	2.80	mg/kg	11/24/1993	mee
Antimony (ICP)	92.5	94.1	1.7	1250	ND	1156	1176	mg/kg	11/23/1993	jeo
Arsenic (GFAA)	76.2	74.2	2.7	5.00	ND	3.81	3.71	mg/kg	11/24/1993	djm
Barium (ICP)	96.0	96.0	0.0	125	ND	120	120	mg/kg	11/23/1993	jeo
Beryllium (ICP)	97.6	97.6	0.0	125	ND	122	122	mg/kg	11/23/1993	jeo
Cadmium (ICP)	96.0	95.2	0.8	125	ND	120	119	mg/kg	11/23/1993	jeo
Chromium (ICP)	97.6	96.8	0.8	125	ND	122	121	mg/kg	11/23/1993	jeo
Chromium+6 (FLAA)	N/A									
Cobalt (ICP)	96.8	96.8	0.0	125	ND	121	121	mg/kg	11/23/1993	jeo
Copper (ICP)	95.2	94.4	0.8	125	ND	119	18	mg/kg	11/23/1993	jeo
Lead (GFAA)	136.4	147.2	7.6	2.50	1.2	4.61	4.88	mg/kg	11/24/1993	djm
Mercury (CVAA)	107.2	111.6	4.0	2.50	ND	2.68	2.79	mg/kg	11/29/1993	ket
Molybdenum (ICP)	95.2	95.2	0.0	125	ND	115	115	mg/kg	11/23/1993	jeo
Nickel (ICP)	94.4	94.4	0.0	125	ND	118	118	mg/kg	11/23/1993	jeo
Selenium (GFAA)	58.0	60.4	4.1	2.50	ND	1.45	1.51	mg/kg	11/29/1993	djm
Silver (ICP)	92.0	92.0	0.0	125	ND	115	115	mg/kg	11/23/1993	jeo
Thallium (ICP)	96.8	96.0	0.8	1250	ND	1210	1200	mg/kg	11/23/1993	jeo
Vanadium (ICP)	95.2	95.2	0.0	125	ND	119	119	mg/kg	11/23/1993	jeo
Zinc (ICP)	93.6	92.8	0.86	125	ND	117	116	mg/kg	11/23/1993	jeo
Antimony (ICP, WET)	85.6	85.6	0.0	50.0	ND	42.8	42.8	mg/L	12/13/1993	jeo
Beryllium (ICP, WET)	80.0	81.0	1.2	5.00	ND	4.00	4.05	mg/L	12/13/1993	jeo
Lead (GFAA,WET)	101.6	99.2	2.3	0.125	<0.02	0.127	0.124	mg/L	12/14/1993	djm
Mercury (CVAA,WET)	108.0	102.0	5.7	0.100	ND	0.108	0.102	mg/L	11/02/1993	ket
Thallium (GFAA,WET)	77.2	70.0	9.8	0.250	ND	0.193	0.175	mg/L	12/09/1993	djm
METHOD 8240(GCMS,Solid)										
Benzene	109.2	113.4	3.8	50.0	ND	54.6	56.7	ug/kg	11/29/1993	jes
Chlorobenzene	100.6	111.2	10.0	50.0	ND	50.3	55.6	ug/kg	11/29/1993	jes
1,1-Dichloroethene	98.6	99.6	1.0	50.0	ND	49.3	49.8	ug/kg	11/29/1993	jes
Toluene	114.2	120.6	5.5	50.0	ND	57.1	60.3	ug/kg	11/29/1993	jes
Trichloroethene	102.8	105.4	2.5	50.0	ND	51.4	52.7	ug/kg	11/29/1993	jes
Toluene-d8 (SURR)	117	112			115			% Rec.	11/29/1993	jes
Bromofluorobenzene (SURR)	87	92			90			% Rec.	11/29/1993	jes
1,2-Dichloroethane-d4 (SURR)	107	103			96			% Rec.	11/29/1993	jes
METHOD 8270(GCMS,Solid)										
Acenaphthene	72.0	72.0	0.0	108	ND	78	78	ug/kg dw	11/23/1993	sjg
1,4-Dichlorobenzene	42.0	44.0	4.7	108	ND	46	48	ug/kg dw	11/23/1993	sjg
2,4-Dinitrotoluene	50.0	44.0	12.8	108	ND	54	48	ug/kg dw	11/23/1993	sjg
N-Nitroso-Di-N-propylamine	53.0	55.0	3.7	108	ND	57	60	ug/kg dw	11/23/1993	sjg
Pyrene	80.0	82.0	2.5	108	ND	87	89	ug/kg dw	11/23/1993	sjg
1,2,4-Trichlorobenzene	55.0	54.0	1.8	108	ND	60	58	ug/kg dw	11/23/1993	sjg
4-Chloro-3-methylphenol	72.0	77.0	6.7	217	ND	156	167	ug/kg dw	11/23/1993	sjg
2-Chlorophenol	48.5	50.5	4.0	217	ND	100	109	ug/kg dw	11/23/1993	sjg
4-Nitrophenol	63.0	66.0	4.7	217	ND	136	143	ug/kg dw	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Analyst Initials
Pentachlorophenol	89.0	89.0	0.0	217	ND	193	193	ug/kg dw	11/23/1993	sjg
Phenol	49.5	51.0	3.0	217	ND	110	110	ug/kg dw	11/23/1993	sjg
Nitrobenzene-d5 (SURR)	51	56			49			% Rec.	11/23/1993	sjg
2-Fluorobiphenyl (SURR)	62	64			62			% Rec.	11/23/1993	sjg
p-Terphenyl-d14 (SURR)	56	56			49			% Rec.	11/23/1993	sjg
Phenol-d5 (SURR)	52				55		56	% Rec.	11/23/1993	sjg
2-Fluorophenol (SURR)	44	45			48			% Rec.	11/23/1993	sjg
2,4,6-Tribromophenol (SURR)	83	83	0.0		72			% Rec.	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
Soil pH measured in water	99.3		6.95	7.00	pH units	11/20/1993	bbh
Flashpoint/Ignitability	101.2		82	81	Degree F	11/18/1993	pbg
Sulfide	101.6		317	312	mg/kg	11/18/1993	bbh
Cyanide (Total)	100.9		0.204	0.2022	mg/kg	11/24/1993	mee
Antimony (ICP)	94.9		949	1000	mg/kg	11/23/1993	jeo
Arsenic (GFAA)	95.8		4.79	5.00	mg/kg	11/24/1993	djm
Beryllium (ICP)	94.2		94.2	100	mg/kg	11/23/1993	jeo
Cadmium (ICP)	93.1		93.1	100	mg/kg	11/23/1993	jeo
Chromium (ICP)	93.8		93.8	100	mg/kg	11/23/1993	jeo
Cobalt (ICP)	93.2		93.2	100	mg/kg	11/23/1993	jeo
Copper (ICP)	92.0		92.0	100	mg/kg	11/23/1993	jeo
Lead (GFAA)	92.0		2.30	2.50	mg/kg	11/24/1993	djm
Mercury (CVAA)	97.2		2.43	2.50	mg/kg	11/29/1993	ket
Molybdenum (ICP)	94.4		94.4	100	mg/kg	11/23/1993	jeo
Nickel (ICP)	91.5		91.5	100	mg/kg	11/23/1993	jeo
Selenium (GFAA)	90.4		2.26	2.50	mg/kg	11/29/1993	djm
Silver (ICP)	89.6		89.6	100	mg/kg	11/23/1993	jeo
Thallium (ICP)	94.7		947	1000	mg/kg	11/23/1993	jeo
Zinc (ICP)	89.7		89.7	100	mg/kg	11/23/1993	jeo
ICP METALS WET							
Antimony (ICP, WET)	86.3		8.63	10.0	mg/L	12/09/1993	rpc
Beryllium (ICP, WET)	80.6		0.806	1.00	mg/L	12/14/1993	jeo
Lead (GFAA,WET)	86.4		0.0216	0.0250	mg/L	12/14/1993	djm
Mercury (CVAA,WET)	108.0		0.0108	0.0100	mg/L	11/02/1993	ket
Thallium (GFAA,WET)	89.8		0.0449	0.0500	mg/L	12/09/1993	djm
METHOD 8240(GCMS,Solid)							
Benzene	102.6		51.3	50.0	ug/kg	11/29/1993	jes
Chlorobenzene	99.6		49.8	50.0	ug/kg	11/29/1993	jes
1,1-Dichloroethene	95.8		47.9	50.0	ug/kg	11/29/1993	jes
Toluene	100.4		50.2	50.0	ug/kg	11/29/1993	jes
Trichloroethene	103.0		51.5	50.0	ug/kg	11/29/1993	jes
Toluene-d8 (SURR)	104.0		104	100	% Rec.	11/29/1993	jes
Bromofluorobenzene (SURR)	101.0		101	100	% Rec.	11/29/1993	jes
1,2-Dichloroethane-d4 (SURR)	101.0		101	100	% Rec.	11/29/1993	jes
METHOD 8270(GCMS,Solid)							
Acenaphthene	77.0		77	100	ug/kg	11/23/1993	sjg
1,4-Dichlorobenzene	68.0		68	100	ug/kg	11/23/1993	sjg
2,4-Dinitrotoluene	78.0		78	100	ug/kg	11/23/1993	sjg
N-Nitroso-Di-N-propylamine	74.0		74	100	ug/kg	11/23/1993	sjg
Pyrene	80.0		80	100	ug/kg	11/23/1993	sjg
1,2,4-Trichlorobenzene	75.0		75	100	ug/kg	11/23/1993	sjg
4-Chloro-3-methylphenol	76.0		152	200	ug/kg	11/23/1993	sjg
2-Chlorophenol	72.0		144	200	ug/kg	11/23/1993	sjg

Ref: Johnny Lin, Project No: 20507-001-01

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
4-Nitrophenol	82.5		165	200	ug/kg	11/23/1993	sjg
Pentachlorophenol	104.5		209	200	ug/kg	11/23/1993	sjg
Phenol	66.0		132	200	ug/kg	11/23/1993	sjg
Nitrobenzene-d5 (SURR)	75.0		75	100	% Rec.	11/23/1993	sjg
2-Fluorobiphenyl (SURR)	74.0		74	100	% Rec.	11/23/1993	sjg
p-Terphenyl-d14 (SURR)	65.0		65	100	% Rec.	11/23/1993	sjg
Phenol-d5 (SURR)	71.0		71	100	% Rec.	11/23/1993	sjg
2-Fluorophenol (SURR)	75.0		75	100	% Rec.	11/23/1993	sjg
2,4,6-Tribromophenol (SURR)	81.0		81	100	% Rec.	11/23/1993	sjg

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. **Do not** multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
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[redacted]TIC[redacted] ENVIRONMENTAL TESTING, INC.

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6652

CHAIN OF CUSTODY RECORD

COMPANY: CENTURY WEST ENGINEERING
ADDRESS: 7950 DUBLIN BLVD
PHONE: FAX:
PROJECT NAME/LOCATION: Johnny Lin
PROJECT NUMBER: 20507-001-01
PROJECT MANAGER: J GRIBI

SAMPLED BY: Bob Bogar (PRINT NAME) SIGNATURE: Bob Bog
(PRINT NAME) SIGNATURE

TURNAROUND TIME 10 DAY (S)

ANALYSES: RCI, TPH-MO, TTLC-CAM 17, 8240, 8270

DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS	MATRIX	PRESERVED Y/N	RCI	TPH-MO	TTLC-CAM 17	8240	8270						COMMENTS
11/16		SP-2.1, 2.2, 2.3, 2.4 (Composite into one)		X	4	SOIL	Y	X	X	X	X	X						

CUSTODY SEALED 11/16 Seal intact

RESULTS TO:

INVOICE TO:

RELINQUISHED BY.	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
Bob Bog	11/16 3:59	[signature]	[signature]	11/16/93 16:30	

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				11/17/93 0800	[signature]

METHOD OF SHIPMENT: (VIA NCS)

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK