Alameda County
FEB 3 8 2006
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April 21, 2003

2006 FEB 27 PM 2: 50

Ms. Janice Weston
Community Development Corporation of Oakland
5636 Shattuck Avenue
Oakland, California 94609

Re: Preliminary Soil and Groundwater Quality Assessment

3701 Martin Luther King Jr. Way, Oakland, California

Project No.: IMP 2003-1

Dear Ms. Weston:

Impact Environmental Services is pleased to submit this preliminary soil and groundwater quality assessment report for the above referenced site. The enclosed report contains a description of our investigation, results of soil and groundwater sample analyses, and our conclusions regarding soil and groundwater quality at the site.

We appreciate the opportunity to provide services to you on this project and trust this report meets your needs at this time. Should you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Impact Environmental Services

Joseph A. Cotton Principal Geologist

JC\DL:vc\encl.

Copies: Addressee (1)

Tel. (510) 703-5420

Preliminary Soil and Groundwater Quality Assessment 3701 Martin Luther King Jr. Way Oakland, California

April 21, 2003

Prepared For:

Community Development Corporation of Oakland 5636 Shattuck Avenue Oakland, California 94607

Prepared By:

Impact Environmental Services 39120 Argonaut Way, #223 Fremont, California 94538

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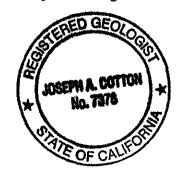


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Preliminary Soil and Groundwater Quality Assessment 3701 Martin Luther King Jr. Way Oakland, California

1.0 INTRODUCTION

This report presents the results of a preliminary assessment of soil and groundwater quality at the Property located at 3701 Martin Luther King Jr. Way (subject Property) in Oakland, County of Alameda, and State of California. The location of the site is shown on the Site Location Map, Figure 1.

2.0 OBJECTIVE

The primary objective of this investigation was to evaluate the potential presence of all or part of the following constituents of concern (COCs) in soil and groundwater at the site. For the purpose of this investigation COCs selected for this investigation include: organic and total lead, total oil and grease (TOG), total petroleum hydrocarbons (TPH) as gasoline (TPHg), benzene, toluene, ethyl benzene, and total xylenes (BTEX) and methyl-tert-butyl ether (MTBE). The COCs selected are consistent with materials used at gasoline service stations and auto repair facilities.

3.0 SCOPE OF SERVICES

The work performed during this investigation included the following activities:

- Performing a preliminary geophysical survey to confirm the locations of underground storage tanks (USTs) and associated piping.
- Advancing four exploratory borings (E-1 through E-4) to total depths ranging from 14 to 17.5 feet below ground surface (bgs).
- Collecting 13 soil samples and two groundwater "grab" samples from the borings and analyzing samples for all or part of the following constituents: organic lead in accordance with California LUFT: California Department of Health Services Leaking Underground Fuel Tank Manual, October 1989; total lead using EPA 6010; TOG using EPA Method 1664, TPHg with BTEX and MTBE by EPA Method 8015/8020.
- Preparing this report, which contains a description of our investigation, results of soil and groundwater sample analyses, findings of the preliminary geophysical survey, and our conclusions regarding the quality of soil and shallow groundwater at the site.

4.0 BACKGROUND

4.1 <u>Site Description</u>

The Property is located at the northwest corner of Martin Luther King Jr. Way (MLK) and 37th Street in the City of Oakland, County of Alameda, and State of California. The subject Property comprises Alameda County assessor parcel 0012-965-005. A site location map and site plan is presented in Figures 1 and 2, respectively.

The Property is in a mixed residential and light commercial area of north Oakland. City of Oakland Zoning Department records indicate that the Property is categorized as general commercial zone (C-40). The subject Property consists of a roughly 6,100 square feet, rectangular parcel with both paved (75%) and unpaved (25%) surfaces. Residential development borders the Property to the north and west. The Property is bound to the south and east by 37th Street and MLK, respectively.

A retail gasoline service station and/or automobile repair garage operated at the site from the 1940s to the mid-1990s. Almost all structures related to the service station, including the underground storage tanks, automobile repair garage, and service attendant kiosk are still present at the site. The gasoline dispensers have been removed, however remnants of the concrete dispenser island are still present beneath the canopy and next to the suspected gasoline fuel tank(s). The subject Property is currently vacant.

4.2 Site Topography

Based on a review of the United States Geological Survey 7.5 minute map of the West Oakland Quadrangle, the average elevation at the site is approximately 100 feet above mean sea level. The paved portion of the site is nearly planar with limited relief. The rear, unpaved portion of the site exhibits a more irregular relief with soil mounds and slight depressions. Regional topography slopes gently to the west, towards the San Francisco Bay, located approximately 3 miles to the west of the site.

4.3 Regional Geology and Hydrogeology

The Property is located in the Santa Clara Valley, a northwest-southeast trending structural basin that is bound on the southwest by the San Andreas Fault Zone and the Santa Cruz Coastal Mountains and on the northeast by the Hayward Fault, Calaveras Fault, and the Diablo Range. Regional topography slopes gently to the west towards San Francisco Bay. Oakland Inner Harbor is the closest significant surface water; located approximately 3 miles south of the subject Property.

During the Cenezoic Era (the last 65 million years), the region has been subject to a complex tectonic evolution as the ancestral California margin underwent transition from a convergent to a transform plate margin. During this period, the earth's crust was divided into smaller sinking blocks that formed basins and embayments. These are interspersed with zones of uplift that formed the highland areas.

The Santa Clara Valley basin is a large structural depression containing unconsolidated alluvial deposits derived from the Diablo Range to the east and the Santa Cruz Mountains to the west. Sediment from slope wash, landslides, and gullies were carried down slope by shifting alluvial stream channels to the marshlands and the San Francisco Bay in time, infilling the Santa Clara Valley with alluvial material. Other sediments occupying the Valley originated from the marine environment that covered a portion of the basin. The basin generally consists of about 1,000 to 2,000 feet of these deposits that unconformably overlie bedrock formations. Alluvial materials at and in the area are characterized by fine-grained alluvial fan and freshwater marsh deposits of relatively low permeability.

The San Francisco Bay Region is also one of the most seismically active regions in the United States and has a long history of extensive earthquake activity. The San Andreas Fault system, located approximately 15 miles southwest of the subject Property, separates the North American and Pacific tectonic plates. The subject Property lies on the North American plate and east of the tectonic zone juxtaposing these two tectonic plates. Other significant local faults of known or suspected seismic activity include the Calaveras Fault (approximately 15-miles to the southeast), the Hayward Fault (approximately 5-miles northeast), and the Rodgers Creek Fault located approximately 20 miles north of the site. The general trend of these faults is toward the northwest. The relative motions along the faults are strike-slip with right-lateral movement. The San Francisco Bay region has a climate that is characterized by cool, wet winters and warm, dry summers. Rainfall in the region typically occurs between October and April and averages approximately 21 inches annually.

5.0 FIELD INVESTIGATION

5.1 Prefield Activities

On March 17, 2003, Impact obtained a drilling permit for the project from the Alameda County Public Works Agency. A copy of the permit is presented in Appendix A. Field activities were performed in accordance with the project Health and Safety Plan presented in Appendix B. Prior to drilling, exploratory boring locations were cleared for underground utilities by Underground Service Alert (USA) and Cruz Brothers Subsurface Locators (Cruz Brothers) of Scotts Valley, California.

5.2 Preliminary Geophysical Survey

On March 20, 2003, Cruz Brothers conducted a preliminary geophysical survey of the subject Property to confirm the locations of suspected USTs and associated piping. Suspected UST locations were surveyed using a magnetometer capable of detecting metal objects to a depth of five feet bgs.

The geophysical survey confirmed the presence of two to three USTs and approximately 40 feet of piping related to the USTs. The location of the USTs and piping locations are shown on Figure 3. One or two of the metallic objects, believed to be gasoline UST(s), were identified in the southeast corner of the property, adjacent to the former pump island. Although the magnetometer confirmed the presence of a metallic object, it was not apparent whether the detection was one large metal object or two smaller metal objects. Approximately 40 feet of metal piping was detected extending east-west from the north terminus of the suspected gasoline tanks to an apparent fuel fill port just north of the kiosk. Another large metallic object,

believed to be a waste oil tank, was detected in the subsurface along the south wall of the repair garage. The metallic objects were outlined in paint to guide upcoming tank/piping removal activities at the site.

5.3 Exploratory Boring Advancement

Four exploratory borings, E-1 through E-4, were advanced at the subject Property on March 21, 2003, at the approximate locations shown on Figure 3. Each boring was placed near suspected sources (i.e., USTs, fuel distribution piping, stained surface soil, and a historical excavation) to evaluate the nature and extent of COCs in shallow soil and groundwater at the site. The borings were advance in the immediate vicinity to the suspected sources to provide a quantitative assessment of contamination along the edge of these potential sources.

Boring E-1 was located in the western section of the subject Property in an unpaved area near several surface oil stains and a former un-permitted shallow excavation identified in historical aerial photographs. Boring E-2 was advanced along the south wall of the repair garage, less than five feet from a suspected underground waste oil tank. Boring E-3 was placed less than five feet from suspected UST fill and fuel distribution piping. Boring E-4 was completed in the eastern section of the site, less than five feet from the suspected gasoline USTs. The borings were advanced to depths ranging from 14.5 to 17.5 feet bgs with a truck-mounted drill rig equipped with 8-inch diameter hollow stem augers (HSA).

At least three soil samples were collected from each boring at depths of approximately five, ten and fifteen feet bgs and submitted to the laboratory for chemical analysis. Groundwater grab samples were collected from borings E-1 and E-4 and submitted to the laboratory for chemical analysis

Borings were backfilled with neat cement upon completion of soils classification and soil and groundwater sample collection. The approximate locations of the borings were determined by measuring wheel, and should be considered accurate only to the degree implied by the method used.

5.4 Soil Sampling

At least three soil samples for laboratory analysis were collected from each boring from depths of approximately five, ten and fifteen feet bgs (one soil sample was collected from depth of 1.5 – 2.0' in boring E-4) by driving a 2-inch diameter, California Modified sampler through and in advance of the HSAs. The sampler was driven with a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler 18 inches were recorded as the penetration resistance (blows/foot) on the boring logs. Soil samples were collected in 2-inch diameter, 6-inch long, stainless steel liners filled to the fullest extent possible to reduce the potential for loss of volatiles. The samples were examined for logging, sealed with Teflon-lined plastic caps, labeled and placed in a cooled container. Select soil samples were transported under chain-of-custody control to a State-certified analytical laboratory.

Soils encountered during drilling were classified in the field by a geologist licensed by the State of California. Soil classification was conducted in accordance with the Unified Soil Classification System (USCS). Soil samples for soils classification were collected from various depths (1.5-17.5' bgs) from the borings to obtain a complete profile of the subsurface stratigraphy. Boring logs are presented in Appendix C.

5.5 Groundwater Grab Sampling

Groundwater was encountered during drilling in borings E-1, E-2, and E-4 at depths ranging from approximately 14 to 16 feet bgs. Groundwater was not encountered in Boring E-3, which extended to a total depth of exploration of approximately 14.5 feet bgs. Grab groundwater samples were collected from borings E-1 and E-4 using a cleaned, Teflon bailer. Groundwater samples were decanted from the bailer into laboratory-supplied glassware, labeled, immediately placed in a cooled container, and transported under chain-of-custody control to a State-certified analytical laboratory. As water samples were collected from open boreholes, and not from developed and sampled groundwater monitoring wells, the chemical test results are generally higher than actual representative groundwater sample results.

5.6 Decontamination

The drill rig and sampling equipment were steam-cleaned prior to use, and samplers, liners, and bailers were thoroughly cleaned with laboratory-grade detergent and de-ionized water between samples to reduce the potential for cross-contamination.

5.7 Site Stratigraphy

Soils encountered in the upper 14 feet consisted primarily of a moist, moderate to high plasticity, silty clay with lesser amounts (10-20%) of sand. Soil encountered below the upper silty clay unit consists of a fine to medium grain, water-bearing sand. Boring logs presented in Appendix C depict subsurface conditions encountered during the field investigation. Groundwater was first encountered in the sand unit at depths ranging from 14 to 16 feet bgs.

6.0 LABORATORY ANALYSIS

6.1 <u>Laboratory Procedures</u>

Soil and groundwater samples were submitted for chemical analysis to Torrent Analytical Laboratory Services, Incorporated (Torrent) of Milpitas, California. Torrent is certified by the State of California for the analyses performed. Thirteen soil samples and two groundwater grab samples were analyzed for all or part of the following: organic lead, total lead, TOG, TPHg, and BTEX with MTBE.

6.2 Soil and Groundwater Analytical Results

Results of the soil and groundwater sample analyses are presented on Table 1 and the laboratory analytical reports (LARs) are attached in Appendix D.

7.0 RISK EVALUATION AND SITE REMEDIATION GOALS

To establish remediation goals for the site, Impact conducted a risk evaluation and for residential site use by comparing the chemical results of this site investigation and physical site conditions to the City of Oakland's Risk-Based Corrective Action Technical Background Document and the State Water Resources Control Board (SWRCB) Interim Guidance and Supplemental Instruction for Determining Low-Risk Fuel Leak Sites. The remediation goals will be used to guide UST/piping removal and to identify pending actions needed to achieve regulatory action closure for residential use of the site.

7.1 Oakland Risk-Based Corrective Action and EPA Region 9 PRGs

Impact's risk screen evaluation for volatile petroleum hydrocarbons is summarized in Matrix A. For the purpose of this evaluation, Impact assumes no restrictions on future siting of residential buildings within the subject Property. Areas not within the footprint of any future building are assumed unpaved. Impact assumes that the site groundwater is not a current or potential future drinking water source. This evaluation uses a 1 meter (3.3 feet) bgs cutoff point between surficial and subsurface soil, consistent with the City of Oakland's Risk-Based Corrective Action Technical Background Document.

Exposure Scenarios: Based on assumed future site use, potential future residential exposure scenarios would include inhalation of onsite indoor and outdoor air, direct dermal contact with surficial soil, and soil ingestion/particulate inhalation.

Risk Screening Levels: Impact used site-specific target levels (SSTLs) risk screening levels for BTEX as published by the City of Oakland's in its May 17, 2000 Oakland Risk-Based Corrective Action Technical Background Document. The City of Oakland did not publish a screening level for lead, so we used the EPA Region 9 Preliminary Remediation Goal (PRG) as a screening level. San Francisco Bay Regional Water Quality Control Board endorses the City of Oakland risk-based screening levels (RBSLs), SSTLs and EPA-PRGs. The Oakland guidance document, like the EPA Region 9 PRG document, does not include risk screen levels for TPH.

Representative Concentrations: Impact used maximum detected concentrations for BTEX and lead within each onsite medium; surficial soil (0 to 3.3 feet bgs); subsurface soil (>3.3 feet bgs); and groundwater. Maximum BTEX and lead concentrations are presented below in Matrix A and B, respectively.

Comparison to Screening Levels: Matrix A below presents Impact's comparison of maximum BTEX concentrations to SSTLs. The Oakland guidance document, like the EPA Region 9 PRG document, does not include risk screen levels for petroleum hydrocarbons (TPH). Ceiling values for TPH in soil (500 mg/kg) and groundwater are recommended to protect against nuisance odors. To protect against nuisance odors, Impact used conservative inhalation exposure screening values. Since screening levels for inhalation of indoor air are more restrictive than levels of inhalation of outdoor air, Impact only evaluated inhalation exposure to indoor air.

Impact's risk screen evaluation for lead in site soil is summarized below in Matrix B. To evaluate the risk posed by residual lead concentrations, Impact compared analytic results to the EPA Region 9 Preliminary Remediation Goal (PRG) of 400 mg/kg for residential development.

Matrix A - Results of Hydrocarbon Exposure Pathways (Residential)

Based on City of Oakland - Version 2000 - SSTI s for Clavey Silt

Based or	n City of Oal	kland - Versio	n 2000 - SSTLs for (Clayev Silt
Exposure Scenario	Target Risk Level	SST La su State de la su Salhani de la sultante de	Maximum Site Concentration	Result
		Benzene		
Volatilization from subsurface soil to indoor air	1x10 ⁻⁵	1.9 mg/kg	1.0 mg/kg*	Potential health risk is below target level.
Volatilization from groundwater to indoor air	1x10 ⁻⁵	5.5 mg/l	<0.018 mg/l	Potential health risk is below target level.
Ingestion/ Inhalation/ dermal contact with surficial soil	1x10 ⁻⁵	19 mg/kg	<0.1 mg/kg	Potential health risk is below target level.
		Toluene		
Volatilization from subsurface soil to indoor air	1x10 ⁻⁵	930 mg/kg	3.6 mg/kg	Potential health risk is below target level.
Volatilization from groundwater to indoor air	1x10 ⁻⁵	>SOL	0.047 mg/l	Potential health risk is below target level.
Ingestion/ Inhalation/ dermal contact with surficial soil	1x10 ⁻⁵	7,100 mg/kg	<0.1 mg/kg	Potential health risk is below target level.
		Ethylbenzene		
Volatilization from subsurface soil to indoor air	1x10 ⁻⁵	SAT	5.7 mg/kg	Potential health risk is below target level.
Volatilization from groundwater to indoor air	1x10 ⁻⁵	>SOL	0.21 mg/l	Potential health risk is below target level.
Ingestion/ Inhalation/ dermal contact with surficial soil	1x10 ⁻⁵	3,900 mg/kg	37 mg/kg	Potential health risk is below target level.
		Xylenes		
Volatilization from subsurface soil to indoor air	1x10 ⁻⁵	SAT	10 mg/kg	Potential health risk is below target level.
Volatilization from groundwater to indoor air	1x10 ⁻⁵	>SOL	<0.005 mg/l	Potential health risk is below target level.
ingestion/ inhalation/ dermal contact with surficial soil	1x10 ⁻⁵	53,000 mg/kg	28 mg/kg	Potential health risk is below target level.
SSTL = Site-Specific Target Level SAT = SSTL exceeds saturated soil	concentration		.⇒ SSTL exceeds solubilit	

SAT = SSTL exceeds saturated soil concentration of chemical>SQL = SSTL exceeds solubility of chemical in water
NA = Not applicable *-indicates impact conservatively used the maximum subsurface contaminant concentration as
the maximum surficial concentration:

Matrix B - Results of Lead Exposure Pathways (Residential)

Based on Lead Concentrations using EPA Region 9 Preliminary Remediation Goal

Exposure Scenario.	Target Risk Level	SSTL	Maximum Site Concentration	Hesult
		Lead		
Volatilization from subsurface soil to indoor air	1x10 ⁻⁵	NA	NA	NA NA
Volatilization from groundwater to indoor air	1x10 ⁻⁵	NA	· NA	NA
Ingestion/ Inhalation/ dermal contact with surficial soil	1x10 ⁻⁶	400 mg/kg (EPA PRG)	18 mg/kg	Maximum site concentration is below SSTL.
SSTL = Site Specific Target kevel + s NA = Not applicable - ** * * * * * * * * * * * * * * * * *				and Color of the state of the

The Oakland guidance document, like the EPA Region 9 PRG document, does not include risk screen levels for petroleum hydrocarbons (TPH). It is Impact's opinion that TPHg concentrations detected in soil at the site does not pose a nuisance or significant human health risk since concentrations are below the TPHg soil ceiling value of 500 mg/kg and BTEX concentrations are below soil risk screening levels. TPH is a combination of many specific compounds, including BTEX. Dr. Roger Brewer of the RWQCB stated that the TPH risk screening criteria in the RWQCB guidance document are flexible and address nuisance conditions such as hydrocarbon odors in groundwater and soil. Ceiling values for TPH in soil and groundwater are recommended to protect against this nuisance. The TPHg detected in soil at the site is likely to partially or fully biodegrade. It is anticipated that residual TPHg and BTEX will be removed during upcoming UST/piping removal activities at the subject Property.

7.2 Site Data Comparison with SWRCB Low-Risk Fuel Release Site Criteria

Impact compared physical and chemical conditions at the subject Property to six criteria established by the State Water Resources Control Board (SWRCB) Interim Guidance and Supplemental Instruction for Determining Low-Risk Fuel Leak Sites. This comparison was conducted to determine what efforts would be required to achieve regulatory corrective action closure and to achieve status as a "low-risk fuel leak site."

In October 1995, Lawrence Livermore National Laboratory (LLNL) presented to the SWRCB, a final report titled "Recommendations to Improve the Cleanup Process for California's Underground Fuel Tanks'. This report was based on LLNL's review of investigation and remediation results of California's historical LUFT cases. In summary, the report found that:

- Most LUFT plumes are predictable and plume lengths rarely exceed about 250 feet;
- Natural (passive) biodegradation is a very important factor controlling the plume size and mass;
- Usually, only shallow groundwater was impacted at LUFT sites, not deep aquifers.

Based on the LLNL's report, SWRCB issued Interim Guidance on December 8, 1995, on required cleanup at "low risk fuel sites". On January 5, 1996, the Regional Water Quality Control Board — San Francisco Bay Region, issued Supplemental Instructions to the SWRCB's Interim Guidance. The Supplemental Instruction provided the six criteria for classifying a site as a "low risk fuel leak site". The following are the results of the comparison to the following six criteria for classification of a site as a "low-risk fuel leak site.

CRITERION #1

Has the leak been stopped and on going sources, including free product, been removed or remediated? The result of the preliminary geophysical survey suggests that two to three USTs and approximately 40 feet of piping are present onsite in the subsurface. These features may be sources of contamination and will have to be mitigated before regulatory corrective action closure can be achieved at the site. The USTs, piping and any significantly contaminated soil and groundwater will be removed in the coming months.

CRITERION #2

Has the site been adequately characterized? The results of the risk screening indicate that BTEX and lead in soil and groundwater near potential sources do not exceed SSTLs. This suggests that residual hydrocarbons detected in soil and groundwater are limited to areas near existing sources and do not pose a significant risk to human health. Lead concentrations in soil near suspected sources are significantly below the PRG for residential property.

CRITERION #3

Does a significant groundwater impact currently exist and are contaminants found in groundwater at levels above established SSTLs, RBSLs or other applicable water quality objectives? Groundwater is encountered at approximately 15 feet bgs. The results of the risk screening indicate that petroleum hydrocarbons and lead in groundwater do not exceed the site-specific target levels in the Oakland risk-based corrective action guidance document. This suggests that residual hydrocarbons in groundwater near suspected source areas do not pose a significant risk to human health. This also suggests that any possible significant (above RBSLs and SSTLs) contamination associated with the existing USTs and piping is limited in extent and restricted to the area immediately surrounding these suspected sources.

CRITERION #4

Do water wells, deeper drinking water aquifers, surface water, or other sensitive receptors likely to be impacted? There does not appear to be water wells, deeper drinking water aquifers, surface water, on other sensitive receptors likely to be impacted once the USTs, piping and any significantly contaminated soil and groundwater are removed from the site.

CRITERION #5

Does the site present a significant risk to human health? The soil and groundwater quality data collected during this assessment indicates that once the USTs, piping, and any residual soil and groundwater contamination is removed, it is not likely that the site will present a risk to human health. It is expected that soil and groundwater contamination exceeding the SSTLs and RBSLs will be excavated and removed from the site. Existing soil and groundwater quality data suggests that any significant (above RBSLs and SSTLs) contamination associated with the existing UST, piping, and contaminated soil is limited to the area in the immediate vicinity of these potential sources.

CRITERION #6

Does the site present a significant risk to the environment? The soil and groundwater quality data collected during this assessment indicates that once the USTs, piping, and any significant soil and groundwater contamination is removed, the site will not present a risk to the environment. It is expected that soil and groundwater contamination exceeding the SSTLs and RBSLs will be removed during UST closure activities scheduled for the coming months. Existing soil and groundwater quality data suggests that any significant (above RBSLs and SSTLs) contamination associated with the existing UST and piping, is local to the area

immediately surrounding these suspected sources.

8.0 CONCLUSIONS

Based on a review of site lithology and soil and groundwater quality data collected during this investigation, the following conclusions can be made:

- Soils encountered near the potential sources areas from the surface to approximately 14 feet consists primarily of silty clay with trace amounts of sand. Soils encountered below the upper silty clay unit (to the depth of exploration of 17 feet bgs), consists primarily of moderately sorted, water-bearing sand.
- Groundwater was first encountered at the site between 14 and 16 feet bgs.
- BTEX and lead were not detected above site RBSLs or SSTLs in soil and groundwater at the subject Property.
- Existing soil and groundwater quality data suggests that any significant (above RBSLs and SSTLs) potential soil and groundwater contamination associated with the existing USTs, piping, and contaminated soil is limited to the area in the immediate vicinity of these potential sources.
- The results of the risk screening indicate that petroleum hydrocarbon and lead concentrations in soil and groundwater samples collected adjacent to potential source areas do not exceed Oakland site-specific target levels. This suggests that residual hydrocarbons and lead in soil and groundwater near the suspected source is limited and will not pose a significant risk to human health or the environment.

9.0 RECOMMENDATIONS

Impact recommends removal of all existing underground storage tanks and associated piping in accordance with applicable laws and regulations. Impact further recommends removal of soil and groundwater with residual concentrations of BTEX and lead above respective SSTLs and PRGs presented in Matrix A and B.

Following completion of the aforementioned recommendation, the Community Development Corporation of Oakland should petition the Oakland Fire Department and Alameda County Health Services Agency for regulatory corrective action closure at the site.

10.0 LIMITATIONS

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/ hydrogeology of the area. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the site conditions and an exhaustive analysis of each conceivable environmental characteristic. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation is thorough enough to describe all geologic/ hydrogeologic conditions of interest at a given site. If conditions have not been identified during the study, such a finding should not therefore be construed as a guarantee of the absence of such conditions at the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

We are unable to report on or accurately predict events that may change the site conditions after the described services are performed, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Geologic/hydrogeologic conditions may exist at the site that cannot be identified solely by visual observation. Where subsurface exploratory work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

TABLE

IMPACT ENVIRONMENTAL

Table 1. Soil and Groundwater Analytical Data - 3701 MARTIN LUTHER KING JR. WAY, OAKLAND, CALIFORNIA

	Date	Sample	TPHg	TOG	Benzene	MTBE	Toluene	Ethylbenzene	Xylenes	Lead	
Sample ID	Sampled	Depth (ft)	(mg/kg)	(mg/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(mg/kg)	Notes
									 		
Soil Samples											
E-1: 5.0'-5.5'	3/21/03	5	ND	NA	<10	<10	<10	<10	<10	5.0	
E-1: 10.0'-10.5'	3/21/03	10	0.23	NA	<10	<10	<10	<10	37	. 5.3	
E-1: 15.0'-15.5'	3/21/03	15	ND	NA	<10	<10	<10	<10	<10	5.2	
E-2: 5.0'-5.5'	3/21/03	5	ND	410	<10	<10	<10	<10	<10	18	
E-2: 10.0'-10.5'	3/21/03	10	ND	ND	<10	<10	<10	<10	<10	5.6	
E-2: 14.0'-14.5'	3/21/03	14	ND	200	<10	<10	<10	<10	18	3.9	
E-3: 5.0'-5.5'	3/21/03	5	0.16	NA	10	<10	<10	<10	21	3.6	
E-3: 9.5'-10.0'	3/21/03	95	80	NA	1,000	< 0.500	3,600	3,200	15,000	6.9/ND*	
E-3: 14.0'-14 5'	3/21/03	14	120	NA	< 0.500	< 0.500	1,900	3,400	13,000	6.0	
E-4: 1.5'-2.0'	3/21/03	1.5	ND	NA	<10	<10	<10	<10	10	5.2	
E-4: 5.5'-6.0'	3/21/03	5.5	0.13	NA	<10	<10	<10	<10	<10	4.0	
E-4: 10 5'-11.0'	3/21/03	10.5	160	NA	< 0.500	< 0.500	3,400	5,700	28,000	12	
E-4: 15.0-15.5"	3/21/03	15	ND	NA	<10	<10	<10	<10	<10	3.7	
Groundwater Samj	ples	,									
Sample ID	Sampled		TPHg	TOG	Benzene	MTBE	Toluene	Ethylbenzene	Xylenes	Lead	Notes
1	•		(ug/L)	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)		
E-1:WATER	3/21/03	N/A	ND	<5.0*	<1.0	<1.0	<1.0	<1.0	<1.0	NA	
E-4:WATER	3/21/03	N/A	1,500	<5.0*	18	<10.0	47	16	210	NA	

Abbreviations and Methods:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015

TOG= Total Oil and Grease by EPA Method 5520 Mod

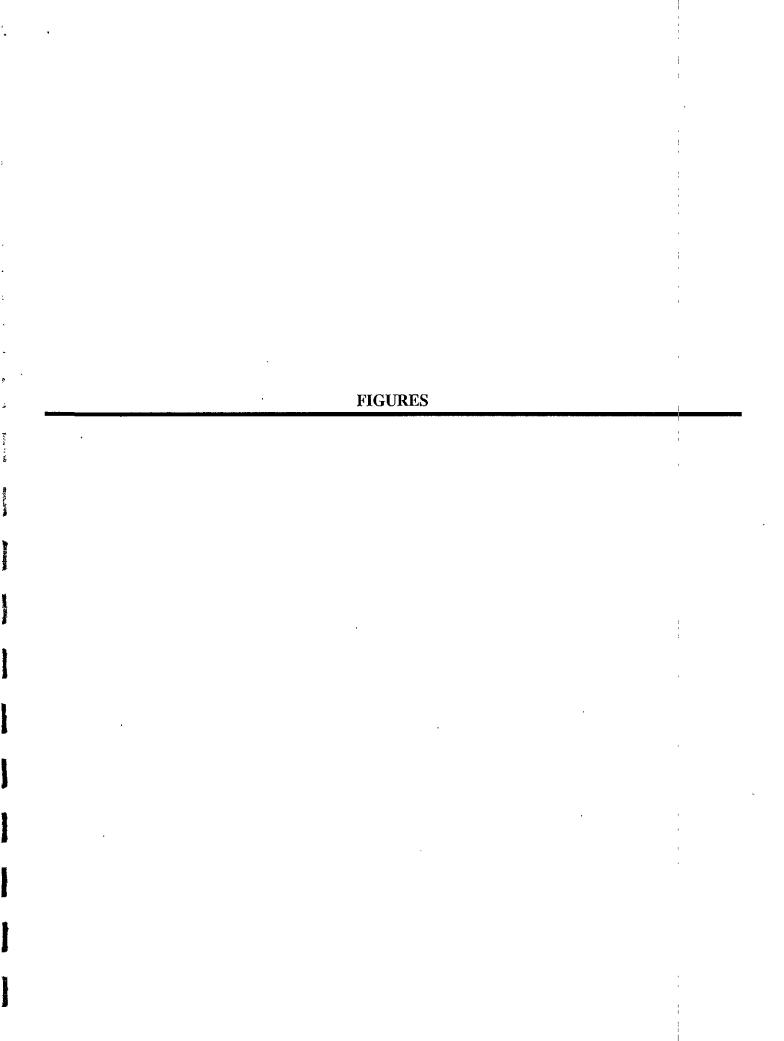
Benzene, methyl-tert-butyl ether, toluene, ethylbenzene, and xylenes by EPA Method 8020

Lead by EPA Method 6010 / Note: *-indicates Organic Lead analysis by EPA

mg/kg = Milligrams per kilogram, equivalent to parts per million (ppm)

ug/kg = Micrograms per kilogram, equivalent to parts per billion (ppb)

mg/L= Milligrams per liter, equivalent to parts per million (ppm) and ug/L= Micrograms per liter, equivalent to parts per billion (ppb)



3701 Martin Luther King Jr Way Oakland CA 94607 US

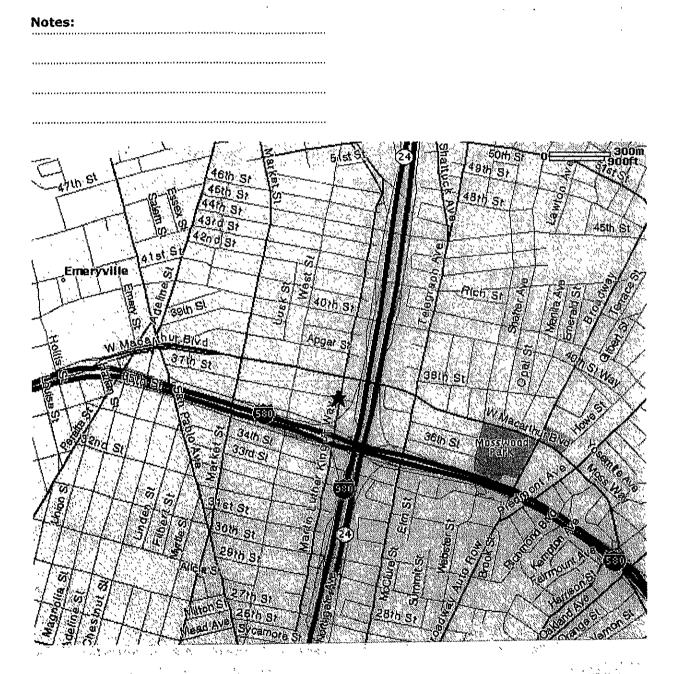
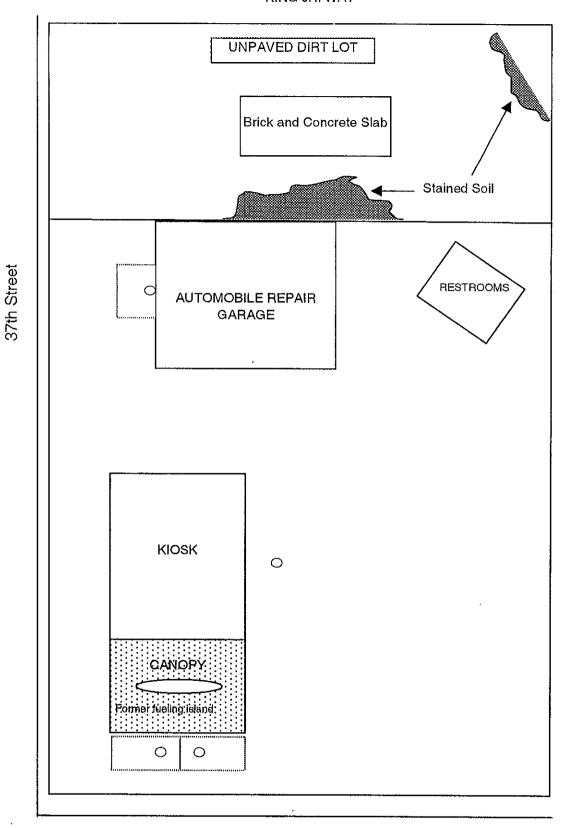


FIGURE 1: SITE LOCATION MAP



Martin Luther King Jr. Way

FIGURE 2: SITE PLAN

Martin Luther King Jr. Way

FIGURE 3: EXPLORATORY BORINGS AND SUSPECTED SOURCES

37th Street

APPENDIX A
Exploratory Boring Permit



LICANT'S SIGNATURE

ASE PRINT NAME

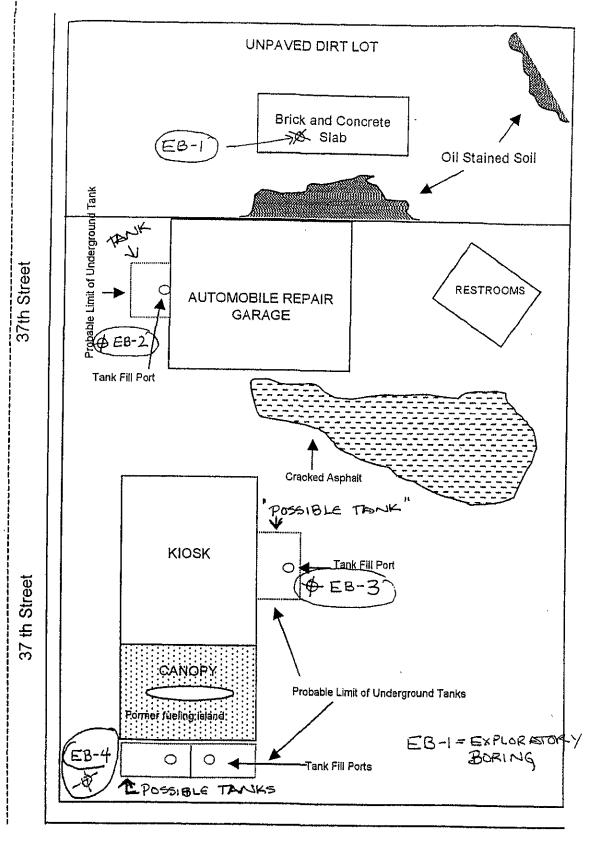
ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 ELMHURST ST. HAYWARD CA. 94544-1395 PHONE (510) 670-6633 James Yoo FAX (510)782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT	APPLICATION
FOR APPLICANT TO COMPLETE	FOR OFFICE USE
OCATION OF PROJECT 3701 MARTIN LUTHER	The state of the s
KING JR. WAY	PERMIT NUMBER WELL NUMBER
SAKLAND CA. 94609	WELL NUMBER
	•
JENT	PERMIT CONDITIONS Circled Permit Requirements Apply
ENCOMMUNITY DEVELOPMENT CORP. OF DAKY	END. GENERAL
Wress 5636 Shattuck Authore 428-9345 (510) VOAKLAND, CA. Zip 94609	 A permit application should be submitted so as to arrive at the ACPWA office five days prior to
PLICANT	proposed starting date. 2. Submit to ACPWA within 60 days after completion of
THE JOSEPH COTTON-IMPACT ENVIRONMENTA FRUICES FOX 510 428-2745 dress 39120 ARGONAUT WAS Phone 510 703-5420	permitted original Department of Water Resources- Well Completion Report.
FREMONT CA Zip 94538	3. Permit is void if project not begun within 90 days of
	approval date B. WATER SUPPLY WELLS
DE OF BROKES	1. Minimum surface seal thickness is two inches of
PE OF PROJECT ell Construction Geotechnical Investigation	cement grout placed by tremie
ell Construction Geotechnical Investigation athodic Protection General	2. Minimum seal depth is 50 feet for municipal and
ater Supply Contamination	Industrial wells or 20 feet for domestic and irrigation
onitoring	wells unless a lesser depth is specially approved. C. GROUNDWATER MONITORING WELLS
	INCLUDING PIEZOMETERS
OPOSED WATER SUPPLY WELL USE	1. Minimum surface seal thickness is two inches of
New Domestic	cement grout placed by tremie.
Aunicipal [Irrigation []	2. Minimum seal depth for monitoring wells is the
ndustrial	maximum depth practicable or 20 feet.
LLING METHOD:	D. GEOTECHNICAL
fud Rotary Air Rotary Auger	Backfill bore hole by tremie with cement grout or cemen
able D Other D	grout/sand mixture.Upper two-three feet replaced in kind or with compacted cuttings.
15.00	E. CATHODIC
LLER'S NAME HEW DRILLING	Fill hole anode zone with concrete placed by tremie.
LLER'S LICENSE NO. 60497	F. WELL DESTRUCTION Send a map of work site. A separate permit is required
,	for wells deeper than 45 feet.
LL PROJECTS	G. SPECIAL CONDITIONS
rill Hole Diarneterin. Maximum	
asing Diameterin. Depth ft.	NOTE: One application must be submitted for each well or well
urface Seal Depthft. Owner's Well Number	destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.
	to geometrical and containingtion investigations.
TECHNICAL PROJECTS	•
umber of Borings 4 (EBI - 4) Maximum ole Diameter 8 in. Depth 15 ft.	
, ,	
RTING DATE 3/21/3	
PLETION DATE $\frac{3/21/3}{}$	
•	APPROVEDDATE
by agree to comply with all requirements of this person and Alameda County Ordinance N	io 73-68

. FIGURE 2: SITE PLAN: 3701 MARTIN LUTHER KING JR. WAY, OAKLAND, CALIFORNIA



Martin Luther King Jr. Way

Fax

• Comm	nent	ts: Mr. Yoo,				
□ Urge	nt .	☑ For Review	☐ Please Com	ment	☑ Please Reply	☑ Please Recycle
	Lut	her King Jr. Way (B	lorings 1-4)	····		
Re:	Drilling Permit Application 3701 Martin			CC:		
Phone:	(510) 670-6633			Date:	03/17/03	
Fax:	(51	0) 782-1939		Pages:	4	
	Wo	rks Agency Water	Resources Sect.	·	Services	!
To:	Jar	nes Yoo-Alameda (County Public	From:	Joseph Cotton-Imp	pact Environmental

Attached is the drilling permit application, site plan map, and site location map for four proposed borings at 3701 Martin Luther Kings Jr. Way in Oakland. Drilling is scheduled to begin at the site this Friday, March 21, 2003 at 9:00. Please review the drilling permit application and fax the approval to (510) 791-0271. If you need to reach me you can contact me at (510) 703-5420.

\ _\

Thank You,

Joseph Cotton, RG

IMPACT Environmental Services

APPENDIX BHealth and Safety Plan

HEALTH AND SAFETY PLAN

PROJECT NO: IMP 2003-1

FIELD ACTIVITIES DATE: March 21, 2003

CLIENT: Community Development Corporation of Oakland

TELEPHONE NO: (510) 428-9345 CONTACT PERSON: Janice Weston

JOB LOCATION:

3701 Martin Luther King Jr. Way (APN#: 0012-965-005) Southwest Corner of 37th Street and Martin Luther King Jr. Way

Oakland, CA. 94607

PROJECT DESCRIPTION: Collect soil and groundwater samples using hollow-stem augers

PROJECT MANAGER: Joseph Cotton

SITE HEALTH & SAFETY OFFICER: Joseph Cotton

CHEMICAL HAZARDS: Significant contamination is not anticipated. Potential chemical hazards may include low level volatile organic compounds (VOCs), low level metals, and petroleum hydrocarbons (gasoline, oil, grease).

		CHEMICAL HAZARDS	
Chemical Name	Description	Persons Exposed; Potential Routes of Exposure	Symptoms of Acute Exposure
Heavy metals	Potentially dis- persed in soil or ground water	Drilling and sampling personnel; Inhalation, ingestion, skin/eye contact	Weakness, pallor, abdominal pain, tremors, eye irritation
Petroleum Hydrocarbons	Potentially dispersed in soil or ground water	Drilling and sampling personnel; Inhalation, absorption, ingestion, skin/eye contact	Nausea, headache, dizziness
Volatile organic compounds	Potentially dispersed in soil or ground water	Drilling and sampling personnel; Inhalation, absorption, ingestion, skin/eye contact	Eye and nose irritation, nausea, headache, dizziness

PHYSICAL HAZARDS: Normal soil sampling and drilling hazards exist at the site and consist of: trip/fall, heavy equipment operation, overhead hazards from equipment.

SAFE WORK PRACTICES: All site safety procedures discussed here for normal working operations (drilling, sampling, monitoring, clean-up) must be followed. Avoid contact with soil and ground water. Wash any exposed skin thoroughly. No smoking, eating or drinking is allowed in the work area.

PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED: This site is designated PPE Level D. While drilling and sampling a minimum of steel toed boots and gloves must be worn. Hardhats are required when any overhead equipment is used. If liquids are encountered, chemically resistant gloves must be worn.

TRAFFIC CONTROL (Pedestrian and Motor Vehicle): Pedestrian and vehicular traffic will be restricted from the areas of operation.

DECONTAMINATION PROCEDURES (PERSONNEL AND EQUIPMENT): Sampling equipment: Trisodium phosphate detergent and water or other acceptable method such as steam cleaning. If there is dermal exposure, wash with soap and water.

EMERGENCY PHONE NUMBERS

AMBULANCE: 911 FIRE DEPT: 911 POLICE DEPT: 911

IMPACT:

(510) 703-5420

Contact: Joseph Cotton

EMERGENCY PROCEDURES: Evacuate to open air in an emergency. Call paramedics if medical attention is required. Mobile phone is available on site.

HOSPITAL: Children's Hospital

747 52nd Street
Oakland, CA 94609
(510) 428-3000

Directions: Proceed north on Martin Luther King Jr. Way approximately 2 miles

to Children's Hospital.

Prepared by:

Joseph Cotton-Geologist

L462-G

2-16-96

кеаа	ру	Date
Read	by	Date

L462-G

2-16-96

APPENDIX C
Boring Logs

APPENDIX D

Laboratory Analytical Reports



483 Sinclair Frontage Rd. • Milpitas, CA 95035 • Ph: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

April 04, 2003

Mr. Joseph Cotton Impact Environmental Services 39120 Arogonat Way, Suite 223 Fremont, CA 94538

TEL: 510-703-5420 FAX 510-713-7790

RE:

Dear Mr. Joseph Cotton:

Order No.: 0303083

Torrent Laboratory, Inc. received 15 samples on 3/21/2003 for the analyses presented in the following report.

All data for associated QC met EPA or Laboratory specification except where noted in the case narative.

Torrent laboratory Inc. is certified by the State of California, ELAP #1991. If you have any question regarding these tests results, please feel free to contact Environmental Coordinator, Ms. Anu Patel at (408)263-5258;ext: 204.

Sincerely,

M Daw Laboratory Director

03 04-04-03 Data



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Visit us at www.torrentlab.com email: analysis@torrentlab.com

<u>Certified Analytical Report of</u> <u>Petroleum Hydrocarbons</u>

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:water

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

WATER

Date/Time Sampled

3/21/2003 3:00:00 PM

Lab Sample ID: 0303083-001A

Date Prepared: 3/24/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline)	SW8015B	3/24/2003	59.2	1	59	ND	μg/L
Surr. Trifluorotoluene	SW8015B	3/24/2003	0	1	65-135	113	%REC



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Certified Analytical Report of **Purgeable Volatile Organics**

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:water

3701MLKJr.way,oakland

Date Prepared: 3/24/2003

Lab Sample ID: 0303083-001A

Sample Location: Sample Matrix:

WATER

Date/Time Sampled 3/21/2003 3:00:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	3/24/2003	1	:== <u></u> : 1	1.0		µg/L
Ethylbenzene	SW8260B	3/24/2003	1	1	1.0	< 1.0	μg/L
Methyl tert-butyl ether	SW8260B	3/24/2003	1	1	1.0	< 1.0	μg/L
Toluene	SW8260B	3/24/2003	1	1	1.0	< 1.0	µg/L
Xylenes, Total	SW8260B	3/24/2003	1	1	1 0	< 1.0	μg/L
Surr: 4-Bromofluorobenzene	SW8260B	3/24/2003	0	1	75-125	83.1	%REC
Surr. Dibromofluoromethane	SW8260B	3/24/2003	0	1	75-125	134	%REC
Surr: Toluene-d8	SW8260B	3/24/2003	0	1	75-125	101	%REC

Note: Surrogate Outside the control limit due to possible matrix interference.



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Certified Analytical Report of Wet Chemistry

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:water

Lab Sample ID: 0303083-001A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/26/2003

Sample Matrix:

WATER

Date/Time Sampled

3/21/2003 3:00:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor		Result	Units	
Oil and Grease	E1664A	3/26/2003	5	1	5.0	< 5.0	mg/L	IJ



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/31/2003

10

65-135

< 10

56.3

μg/Kg

%REC

Lab Sample ID: 0303083-002A

Client Sample ID:

E-1:7,5-5.5

Sample Location:

3701mlkJr.way,oakland

Sample Matrix:

Xylenes, Total

Surr: Trifluorotoluene

SOIL

Date/Time Sampled

3/21/2003 2:30:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Ethylbenzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μ g /Kg
Toluene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg

10

4/1/2003

4/1/2003

Note: Surrogate outside the control limit due to possible matrix interference.

SW8021B

SW8021B



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Certified Analytical Report of

Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:X/5-5.5'

3701mlkJr.way,oakland

Lab Sample ID: 0303083-002A

Sample Location: Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 2:30:00 PM

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1 0	1 1	0.10 65-135	ND 61.0	mg/Kg %REC
Maria Article Control of the Control							

Note: Surrogate outside the control limit due to possible matrix interference.



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Certified Analytical Report of

Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:1/5-5.5

Sample Location:

3701mlkJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 2:30:00 PM

Lab Sample ID: 0303083-002A

Date Prepared: 3/24/2003

The second secon			1	· <u> </u>	r <u>-</u> - :		T- == 1.5= ==
Parameters	Analysis Method	Date Analyzed	RL	Dilution	MRL	Result	Units
L		Analyzeu		Factor	 <u>-</u>	<u> </u>	
Lead	SW6010B	3/26/2003	0.369	1	0.38	5.0	mg/Kg



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Date Received: 3/21/2003

Impact Environmental Services

Date Reported: 4/4/2003

Client Sample ID:

E-1:10-10.51

Lab Sample ID: 0303083-003A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 2:40:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Unit
Benzene	SW8021B	4/1/2003	10	1	10	< 10	-tμg/Κο
Ethylbenzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Κο
Methyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μg/ K g
Toluene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Xylenes, Total	SW8021B	4/1/2003	10	1	10	37	μg/Kg
Surr: Trifluorotoluene	SW8021B	4/1/2003	0	1	65-135	77 9	%RE



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID: Sample Location: E-1:10-10.5'

3701MLKJr.way,oakland

Lab Sample ID: 0303083-003A Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 2:40:00 PM

	,		,	_,			,
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1 0	1	0.10 65-135	0.23 83.0	mg/Kg %REC



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Visit us at www.torrentlab.com email: analysis@torrentlab.com

Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:10-10.5'

Lab Sample ID: 0303083-003A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/24/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 2:40:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	3/26/2003	0.369	1	0.38	5.3	mg/Kg



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID: E-1:15-15.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 2:40:00 PM

Lab Sample ID: 0303083-004A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/1/2003	10	1	10	11. : 1 . · · · · · · · · · · · · · · · · ·	! : µg/Kg
Ethylbenzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Toluene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Xylenes, Total	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Surr. Trifluorotoluene	SW8021B	4/1/2003	0	1	65-135	6.85	%REC

Note: Surrogate outside the control limit due to possible matrix interference.



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Date Received: 3/21/2003

Impact Environmental Services

Date Reported: 4/4/2003

Client Sample ID:

E-1:15-15.5'

Lab Sample ID: 0303083-004A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 2:40:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	1	0.10 65-135	ND 8 00	mg/Kg %REC

Note: Surrogate outside the control limit due to possible matrix interference.



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Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-1:15-15.5'

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/24/2003

Lab Sample ID: 0303083-004A

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 2:40:00 PM

								_
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	
	·, <u></u>	<u> </u>				<u> </u>		
Lead	SW6010B	3/26/2003	0.369	1	0.37	5.2	mg/Kg	



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Date Received: 3/21/2003

Impact Environmental Services

Date Reported: 4/4/2003

Client Sample ID:

E-2:5-5.51

Lab Sample ID: 0303083-005A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 12:00:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/1/2003	10	1	10	< 10	<u></u> μg/Kg
Ethylbenzene	SW8021B	4/1/2003	10,	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Toluene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Xylenes, Total	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Surr: Trifluorotoluene	SW8021B	4/1/2003	0	1	65-135	89.8	%REC



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:5-5.5'

Lab Sample ID: 0303083-005A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 12:00:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	1	0.10 65-135	ND 97,0	mg/Kg %REC



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Certified Analytical Report of **Total Metals**

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/24/2003

Client Sample ID:

E-2:5-5.5'

Sample Location:

3701 MLKJr.way,oakland

Lab Sample ID: 0303083-005A

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 12:00:00 PM

Parameters		Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	•	SW6010B	3/26/2003	0 369	1	0.36	18	mg/Kg



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Certified Analytical Report of Wet Chemistry

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:5-5.5'

Sample Location:

3701MLKJr.way,oakland

SOIL

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 12:00:00 PM

Lab Sample ID: 0303083-005A

Date Prepared: 3/25/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Oil & Grease, Total	SM 5520 Mod.	3/25/2003	50	1	50	410	mg/Kg



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:10-10.5'

3701MLKJr.way,oakland

Lab Sample ID: 0303083-006A

Sample Location: Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 12:20:00 PM

Date Prepared: 3/31/2003;

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/1/2003	10	1	10	< 10	μ g/K g
Ethylbenzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
oluene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
(ylenes, Total	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Surr: Trifluorotoluene	SW8021B	4/1/2003	0	1	65-135	69.5	%REC



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/31/2003

Client Sample ID:

E-2:10-10.5

3701MLKJr.way,oakland

Lab Sample ID: 0303083-006A

Sample Location: Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 12:20:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units		
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	1	0.10 65-135	ND 75.5	mg/Kg %REC		



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Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Date Received: 3/21/2003

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Date Reported: 4/4/2003

Client Sample ID:

E-2:10-10.5'

Lab Sample ID: 0303083-006A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/24/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 12:20:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	3/26/2003	0.369	1	0.36	5.6	mg/Kg



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Certified Analytical Report of Wet Chemistry

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:10-10.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 12:20:00 PM

Lab Sample ID: 0303083-006A

Date Prepared: 3/25/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Oil & Grease, Total	SM 5520 Mod.	3/25/2003	50	11	50		



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:14-14.5'

Lab Sample ID: 0303083-007A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 12:40:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/1/2003	10	-!	10		
thylbenzene	SW8021B	4/1/2003	10	1	10	< 10 < 10	μg/Kg
ethyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
luene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg μg/Kg
rlenes, Total Surr: Trifluorotoluene	SW8021B	4/1/2003	10	1	10	18	μg/Kg
our. I midorotoldene	SW8021B	4/1/2003	0	1	65-135	75.8	%REC



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:14-14.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 12:40:00 PM

Lab Sample ID: 0303083-007A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline)	SW8015B	4/1/2003	0.1	1	0.10	ND	mg/Kg
Surr: Trifluorotoluene	SW8015B	4/1/2003	0	1	65-135	84.0	



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Certified Analytical Report of

Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:14-14.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

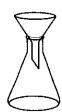
Date/Time Sampled

3/21/2003 12:40:00 PM

Lab Sample ID: 0303083-007A

Date Prepared: 3/24/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	3/26/2003	0 369	1	0.37	3.9	mg/Kg



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Certified Analytical Report of

Wet Chemistry

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-2:14-14.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 12:40:00 PM

Lab Sample ID: 0303083-007A

Date Prepared: 3/25/2003

	"			T :		·	
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Oil & Grease, Total	SM 5520 Mod.	3/25/2003	50	1	50	200	mg/Kg



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Certified Analytical Report of

Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

SW8021B

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/31/2003

65-135

Client Sample 1D:

E-3:5-5.51

Sample Location:

3701MLKJr.way,oakland

Lab Sample ID: 0303083-008A

76.9

%REC

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:00:00 AM

Parameters Analysis Date RLDilution MRL Result Units Method Analyzed Factor ______ Benzene SW8021B 4/1/2003 10 1 10 10 µg/Kg Ethylbenzene SW8021B 4/1/2003 10 1 10 < 10 µg/Kg Methyl tert-butyl ether SW8021B 4/1/2003 10 10 < 10 μg/Kg Toluene SW8021B 4/1/2003 10 1 10 < 10 µg/Kg Xylenes, Total SW8021B 4/1/2003 10 1 10 21 μg/Kg Surr: Trifluorotoluene

0

4/1/2003



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:5-5.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 10:00:00 AM

Lab Sample ID: 0303083-008A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL		MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1 0	1 1	 0.10 65-135	0.16 83.0	mg/Kg %REC



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Certified Analytical Report of

Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:5-5.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:00:00 AM

Lab Sample ID: 0303083-008A

Date Prepared: 3/24/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor		Result	Units	.]
Lead	\$W6010B	3/26/2003	0.369	1	0.37	3.6	L	.]



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Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:9.5-10¹

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 10:20:00 AM

Lab Sample ID: 0303083-009A

Date Prepared: 3/28/2003

none and	# 77 j=		· · · · · · · · · · · · · · · · · · ·		·		
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Organic Lead	11, Article 5, App	3/31/2003	0.5	1	0.50	ND	mg/Kg



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Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:9.5-10'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:20:00 AM

Lab Sample ID: 0303083-009A

Date Prepared: 3/31/2003

-								
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	
Benzene Ethylbenzene Methyl tert-butyl ether Toluene Xylenes, Total Surr: Trifluorotoluene	SW8021B SW8021B SW8021B SW8021B SW8021B SW8021B	4/2/2003 4/2/2003 4/2/2003 4/2/2003 4/2/2003 4/2/2003	500 500 500 500 500 500	1 1 1 1 1 1 1	500 500 500 500 500 500 65-135	1000 3200 < 500 3600 15000 91.6	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg %REC	



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/31/2003

Lab Sample ID: 0303083-009A

Client Sample 1D:

E-3:9.5-10'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:20:00 AM

F= F==== = ===== = = === = = = = = = =									
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units		
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0 1	500 500	50 65-135	80 96.0	mg/Kg %BEC	ز.	



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Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:9.5-10

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:20:00 AM

Lab Sample ID: 0303083-009A

Date Prepared: 3/24/2003

Parameters

Analysis Method

Date Analyzed RL Dilution Factor

1

MRL

Result Units

Lead

SW6010B 3/26/2003

0.369

0 38

6.9

mg/Kg



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

SW8021B

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/31/2003

65-135

92,4

%REC

Lab Sample ID: 0303083-010A

Client Sample ID:

E-3:14-14.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:40:00 AM

Parameters Analysis Date RLDilution Units MRL Result Method Analyzed **Factor** _____ Benzene SW8021B 4/2/2003 500 1 500 < 500 μg/Kg Ethylbenzene SW8021B 4/2/2003 500 1 500 3400 µg/Kg Methyl tert-butyl ether SW8021B 4/2/2003 500 1 500 < 500 µg/Kg SW8021B 4/2/2003 500 1 500 1900 µg/Kg Xylenes, Total SW8021B 4/2/2003 500 1 500 13000 μg/Kg Surr. Trifluorotoluene

0

4/2/2003



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:14-14.5'

Lab Sample ID: 0303083-010A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:40:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Triffuorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	500 500	50 65-135	120 97.0	mg/Kg %REC



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Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-3:14-14.5'

Lab Sample ID: 0303083-010A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/24/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 10:40:00 AM

				,	,		
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	3/26/2003	0.369	1	0.38	6.0	mg/Kg



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<u>Certified Analytical Report of</u> <u>Petroleum Hydrocarbons</u>

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003:

Date Reported: 4/4/2003

Client Sample ID:

E-4:water

Lab Sample ID: 0303083-011A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/25/2003

Sample Matrix:

WATER

Date/Time Sampled

3/21/2003 11:50:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B	3/25/2003	59.2	10	590	1500	μg/L
	SW8015B	3/25/2003	0	10	65-135	119	%REC



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Certified Analytical Report of Purgeable Volatile Organics

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/28/2003

Lab Sample ID: 0303083-011A

Client Sample ID:

E-4:water

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

WATER

Date/Time Sampled 3/21/2003 11:50:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8260B	3/28/2003	1	10	10	18	.:⊤ .⊤ ·
Ethylbenzene	SW8260B	3/28/2003	1	10	10	16	μg/L
Methyl tert-butyl ether	SW8260B	3/28/2003	1	10	10	< 10	μg/L
Toluene	SW8260B	3/28/2003	1	10	10	47	μg/L
Xylenes, Total	SW8260B	3/28/2003	1	10	10	210	μg/L
Surr: 4-Bromofluorobenzene	SW8260B	3/28/2003	0	10	75-125	90.1	%REC
Surr: Dibromofluoromethane	SW8260B	3/28/2003	0	10	75-125	131	%REC
Surr: Toluene-d8	SW8260B	3/28/2003	0	10	75-125	104	%REC

Note: Surrogate outside control limit due to possible matrix interference.



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Certified Analytical Report of Wet Chemistry

Report prepared for: Mr. Joseph Cotton

Date Received: 3/21/2003

Impact Environmental Services

Date Reported: 4/4/2003

Client Sample ID:

E-4:water

Lab Sample ID: 0303083-011A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/26/2003

Sample Matrix:

WATER

Date/Time Sampled

3/21/2003 11:50:00 AM

Parameters	 Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Oil and Grease	 E1664A	3/26/2003	5	1	5.0	< 5.0	mg/L



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:1.5-2.0'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 11:00:00 AM

Lab Sample ID: 0303083-012A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Ethylbenzene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Toluene	SW8021B	4/1/2003	10	1	10	< 10	μg/Kg
Xylenes, Total	SW8021B	4/1/2003	10	1	10	10	μg/Kg
Surr: Trifluorotoluene	SW8021B	4/1/2003	0	1	65-135	51 8	%REC



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:1.5-2.0'

Lab Sample ID: 0303083-012A

Sample Location:

3701MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 11:00:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	1	0.10 65-135	N D 57.5	mg/Kg %REC

Note: Surrogate outside the control limit due to possible matrix interference.



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Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Date Prepared: 3/24/2003

Lab Sample ID: 0303083-012A

Client Sample ID:

E-4:1.5-2.0'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 11:00:00 AM

Date RLDilution MRL Result Units Analyzed

Lead

Method SW6010B

Analysis

. ._ === - -

Factor

1

Parameters

3/26/2003

0.369

0.37

5.2

mg/Kg



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:5.5-6.0'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 11:20:00 AM

Lab Sample ID: 0303083-013A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/2/2003	10	1	10	< 10	µg/Kg
Ethylbenzene	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg
l'oluene	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg
(ylenes, Total	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg
Surr: Trifluorotoluene	SW8021B	4/2/2003	0	1	65-135	87.4	%REC



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Certified Analytical Report of

Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:5.5-6.0°

3701MLKJr.way,oakland

Lab Sample ID: 0303083-013A Date Prepared: 3/31/2003

Sample Location: Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 11:20:00 AM

F	: ,						
Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	1	0.10 65-135	0.13 91.5	mg/Kg %REC



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Certified Analytical Report of

Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003:

Date Reported: 4/4/2003

Client Sample ID:

E-4:5.5-6.0'

Lab Sample ID: 0303083-013A

Sample Location:

3701 MLKJr.way,oakland

Date Prepared: 3/24/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 11:20:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	\$W6010B	3/26/2003	0.369	1	0.36	4.0	mg/Kg



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:10.5-11×0'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 11:40:00 AM

Lab Sample ID: 0303083-014A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/2/2003	500	1	500	< 500	μ g/Kg
Ethylbenzene	SW8021B	4/2/2003	500	1	500	5700	μg/Kg
Methyl tert-butyl ether	SW8021B	4/2/2003	500	1	500	< 500	μg/Kg
Toluene	SW8021B	4/2/2003	500	1	500	3400	μg/Kg
Xylenes, Total	SW8021B	4/2/2003	500	1	500	28000	μg/Kg
Surr: Trifluorotoluene	SW8021B	4/2/2003	0	1	65-135	90.8	%REC



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Certified Analytical Report of

Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:10.5-11>0'

Lab Sample ID: 0303083-014A

Sample Location:

3701 MLKJr.way,oakland

Date Prepared: 3/31/2003

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 11:40:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline) Surr: Trifluorotoluene	SW8015B SW8015B	4/1/2003 4/1/2003	0.1	500 500	50 65-135	160 93.5	mg/Kg %REC



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Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:10.5-11>0'

3701MLKJr.way,oakland

Sample Location: Sample Matrix:

SOIL

Date/Time Sampled 3/21/2003 11:40:00 AM

Lab Sample ID: 0303083-014A

Date Prepared: 3/24/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	
Lead	SW6010B	3/26/2003	0.369	<u> </u>	0.37	12	ma/Ka	}



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Certified Analytical Report of Nonhalogenated Volatiles

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:15-15.5'

. .

Lab Sample ID: 0303083-015A

Sample Location: Sample Matrix:

3701MLKJr.way,oakland

SOIL

Date/Time Sampled

3/21/2003 11:45:00 AM

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Benzene	SW8021B	4/2/2003	10	1	10	< 10	
Ethylbenzene	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg
Methyl tert-butyl ether	SW8021B	4/2/2003	10	1	10	< 10	µg/Kg
Toluene	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg μg/Kg
Xylenes, Total	SW8021B	4/2/2003	10	1	10	< 10	μg/Kg μg/Kg
Surr. Trifluorotoluene	SW8021B	4/2/2003	0	1	65-135	85.7	%REC



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Certified Analytical Report of Petroleum Hydrocarbons

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:15-15.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL

Date/Time Sampled

3/21/2003 11:45:00 AM

Lab Sample ID: 0303083-015A

Date Prepared: 3/31/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
TPH (Gasoline)	SW8015B	4/1/2003	0.1	1	0.10	ND	mg/Kg
Surr: Trifluorotoluene	SW8015B	4/1/2003	0		65-135	91,5	%REC



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Certified Analytical Report of Total Metals

Report prepared for: Mr. Joseph Cotton

Impact Environmental Services

Date Received: 3/21/2003

Date Reported: 4/4/2003

Client Sample ID:

E-4:15-15.5'

Sample Location:

3701MLKJr.way,oakland

Sample Matrix:

SOIL.

Date/Time Sampled

3/21/2003 11:45:00 AM

Lab Sample ID: 0303083-015A

Date Prepared: 3/24/2003

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units
Lead	SW6010B	3/26/2003	0 369	1	0.36	3.7	mg/Kg



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Definitions, legends and Notes

Note	Pescription
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million)
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL
MS/MSD	Matrix spike/matrix spike duplicate
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #



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Torrent Laboratory, Inc.

Date: 04-Apr-03

CLIENT:

Impact Environmental Services

Project:

Lab Order: (

0303083

CASE NARRATIVE

Note: Organic Lead analyzed by Subcontracting Laboratory Certificate # 1644.

483 Sinclair Frontage Rd. Milpitas, CA 95035

Project # 030308 5

Phone: 408.263.5258 FAX: 408.263.8293

CHAIN OF CUSTODY

CHAIN OF COSTODY	Visit us at www.torrentlab.com email: analysis@torrentlab.com							
Company Name: IMPACT ENUIRONMENTAL	Location of Sampling: 3701 MARTIN LUTHER KING JR. WA							
	Purpose: 3701 MLK or Way Phase II							
City: FREMONT State: CA Zip Code: 94538	Special Instructions / Comments:							
Telephone: (510) 743-5420 FAX #510) 791-6271	Olient Oliveria							
Report To: JOSEPH COTTON Sampler: Joseph Cotton	P.O. #:							
THE DATE OF THE WORKING HAVE LIFE WORKING HAVE LIFE OF THE OFFICE A								
Torrent's Date/Time Sample #of Cont. Sample I.D. Sampled Type Cont.	Client's Sample I.D.							
1. 0303083-0014 3-21-3 USASTRE 3 WHEI	 							
	X X E-1:5'-5.5							
307?A 3-21-3 SOL 1	X E-1: 10-10.5							
4(104A 3-21-3 SOIL 1	X X E-1:15-155 >							
5005A 3-21-3 SOIL 1	X X X E-2:5-5.5							
6006A 3-21-3 SOIL 1 "	X X X E-2: 10-10.5 g							
7007A 3-21-3 501L 1	X X X E-2". 14-14.5 =							
8008A 3-21-3 SOIC 1	× × = = 3.5-5.0 F							
9009A 3-21-3 SOIL 1	XXX E-3:95-10 \mathbb{E}							
100/DA 3-21-3 SOIL 1	X X E-3:14.6-14.51							
90709A 3-21-3 SOIL 1 X X X E-3:95-10 F. 100/0A 3-21-3 SOIL 1 X X X E-3:14.6-14.5 Relinquished By: Date: 3-22-3 Time: (10) Received By: Mulliu Date: 1/2/03 Time: 1105 Were Sam' & Received in Good Condition? Dyes DNO Samples on Ice Tyes DNO Method of Shipment								

CHAIN OF CUSTODY

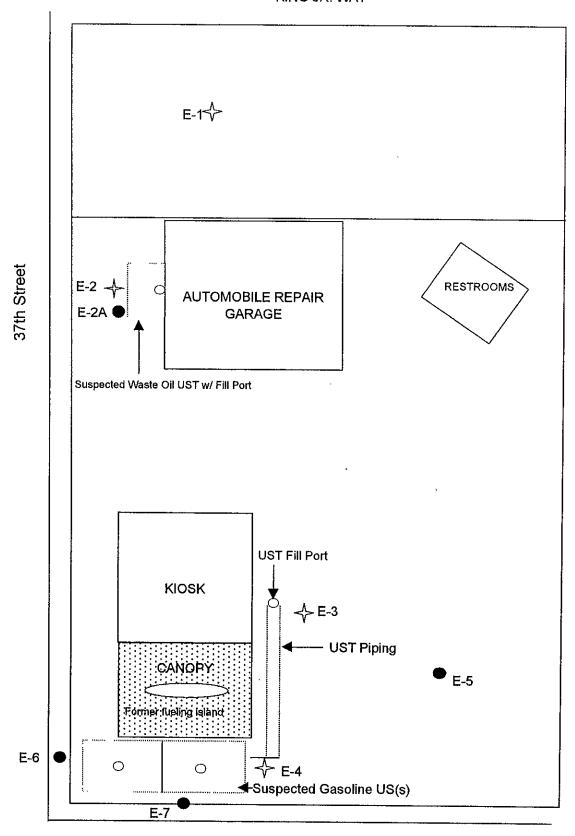
483 Sıncılar Frontage Rd. Milpitas, CA 95035

Project # USUSO85

Phone: 408.263.5258 FAX: 408.263.8293

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	·
Company Name: IMPACT ENVIRONMENTAL	Location of Sampling: 3701 NLK &r. Way, Dakland
Address: 39120 ARGONOUT WBY :# 223	Purpose: Phose II
City: Fremart State: CA Zip Code: 94532	Special Instructions / Comments: STONDARD T.A.T.
Telephone: (510) 7035420 FAX # (510) 791-0271	Jac21462 Caol Com
Report To: Joseph Cotton	P.O.#:
Turnaround	
Torrent's Date/Time Sample #of Cont. Sample I.D. Sampled Type Cont. Type	Client's Sample I.D.
1. 0303083_01/A 3-21-3 50 WEEK 3 VORS VOR	
20/2A 3-21-3 SOIL 1 LINE	1
30/3 A 3-21-3 SIGIL 1 LINE	× X X E-4:5.5-6.0
40/4A 3-21-3 501L 1 LINE	14 X X 6-4:10,5-11,07
50/5 A 3-21-3 SOK 1 LINES	
6.	a p
7.	ant L
8.	- Torrent Lab
9.	WHITE -
10.	HX HX
Relinquished By: Date: 3-22-3 Time: 11'.C Were Samr 's Received in Good Condition ? Types Take Samples on local	5 Received By: Date: 3/2/03 Time: 1105



Martin Luther King Jr. Way