## **Transportation Terminals Company**

4919 Tidewater Ave. Unit B Oakland, CA 94601

10/9/2008

**RECEIVED** 

1:59 pm, Oct 22, 2008

Alameda County Environmental Health

From: Bob Lawlor

To: Haz. Materials Specialist, Alameda Co. Environmental Health Subject: 15651 Worthley Drive, San Lorenzo, CA R02558

Perjury Statement

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Bob Lawlor

Jeneral Partner

## **Environmental Restoration Services**

Site Investigations \* Fuel Tank Closures and Installations \* Site Remediation \* Regulatory Reporting

Alameda County Health Care Services Department of Environmental Health 1131 Harbor Bay Parkway, Second Floor Alameda. CA 94502 October 9, 2008

Attn: Mr. Paresh Khatri, County LUFT Program Coordinator for

15651 Worthley Dr., San Lorenzo

Re: Soil and Groundwater Investigation

Environmental Restoration Services (ERS) is pleased to submit to following Investigative Repor of for your review.

#### 1.0 INTRODUCTION

On April 30, 2003, one 12000 gallon underground tank last containing diesel was removed at the subject site (Figure 2) by ERS. Analytical results of a groundwater sample recovered from the excavation showed elevated levels of diesel constituents.

ERS treated the affected groundwater within the open excavation, has de-watered the excavation and sampled the re-charge. ERS has also sampled soil imported from off-site for backfilling purposes, and was granted a permit to discharge the treated groundwater to the sanitary sewer. When permission had been granted to use the imported soil as backfill, ERS de-watered the excavation one additional time, and sampled the re-charge, and backfilled the excavation using existing and imported soil. Under a discharge permit granted by the Oro Loma Sanitary District (OLSD), ERS has discharged all of the affected groundwater to the sanitary sewer.

This Report first reviews the site background, describes the tank removal, sampling protocols and the analytical results and remedial actions, and then describes the additional investigative scope of work, as requested by the Alameda County Health Care Services Agency (ACHCSA)

#### 1.1 Site Location

The site is located in a commercial district of San Lorenzo, California on property at 15651 Worthley Dr. (Figure 1).

PO Box 2006 \* Menlo Park \* California \* 94026 \* Phone 408/655-9434 \* Fax 650/325-3238

### 1.2 Background

On April 30, 2003, one 12,000 gallon underground tank last containing diesel was removed.

### 1.3 Site History

### 1.3.1 Description of Site

The site is occupied by a trucking terminal. About 20% of the site is occupied by the present structures, with the remaining area covered by asphalt and concrete driving surfaces.

### 2.0 SITE DESCRIPTION

### 2.1 Site Description

The site is located approximately 200 feet southeast of the corner of Grant Ave., and Worthley Dr.. An approximate 12,000 square foot office and trucking terminal is located down the center portion of the parcel with an approximate 2000 square foot truck repair building located in north corner of the parcel. The majority of the remaining property is paved.

### 2.2 Vicinity Map

A vicinity map is given in Figure 1 which includes the location of any known hydraulic influences. San Lorenzo Creek lies approximately 1600 feet northwest of the site and San Francisco Bay lies approximately 2700 feet northwest of the site. A site map is given in Figure 1 which includes information on adjacent streets.

### 2.3 Depth to Groundwater

Depth to groundwater based groundwater elevation within the existing excavation at the site and from groundwater borings, is approximately three and one half to four feet below ground surface (bgs.)

### 2.4 Soil Profile

Previous boring logs show predominantly high plasticity clays starting at the ground surface, becoming a silty clay at approximately three feet bgs., becoming a silty fine sand or clay silt.

### 2.5 Waste Removal

One tank has been removed from the site.

# 2.6 Previous Investigative and Remedial WorkOn April 30, 2003, permission was given by the Health Inspector Robert Weston of the ACHSA to

appear to be stained and emit an odor. The tank was transported to the ECL T.S.D. facility in Richmond.

On April 30, 2003, after removal of the UST, ERS recovered one soil sample ("West SW @4") from the western excavation sidewall at approximately 4' bgs., and one groundwater sample from

the excavation ("Pit GW"). The results of the analysis indicated levels of TPH/d, BTEX and fuel oxygenates below the varying detection limit for both samples, with the exception of TPH/d

remove the tank from the excavation. The pea-gravel backfill material surrounding the tanks did

concentrations in groundwater sample "Pit GW" at 2560 parts per million (ppm).

On May 1, 2003 the groundwater within the excavation was inoculated with Solmar L-100 hydrocarbon consuming microbes. The groundwater within the excavation was aerated using a submersible electric pump.

On June 5, 2003, the excavation was dewatered of approximately 5000 gallons and stored onsite within a 5000 gallon aboveground storage tank (AST) and as groundwater was recharging into the excavation, a grab water sample was recovered. The analytical results of the groundwater recharge sample indicated no BTEX above the detection limit and 0.52 parts per million of TPH/d.

On June 5, 2003, one sample was obtained from the water contained in the tank and tested per Oro Loma Sanitary District (OLSD) waste discharge requirements. The analytical results were below discharge limits and a discharge permit was obtained from the OLSD.

below discharge limits and a discharge permit was obtained from the OLSD.

On October 1, 2003 the 5000 gallons of groundwater within the AST and approximately 2000 gallons of groundwater within the excavation, was disposed of to the sanitary sewer. On

water sample was recovered. The analytical results of the groundwater recharge sample indicated no TPH/d above the analytical detection limit. On October 1, 2003, prior to backfill, ERS also recovered one soil sample ("East-SW @4") from the eastern excavation sidewall at approximately 4' bgs.. The analytical results of the soil sample indicated no TPH/d or BTEX above the analytical detection limit.

October 1, 2003, as groundwater was recharging into the excavation prior to backfill, a grab

On October 17, 2006, six borings were advanced at the site using a small diameter push rig (Geo-Probe) to a depth of approximately 8 feet. The borings were located around the former tank location, as shown in Figure 2. Groundwater samples were recovered from each boring. Analytical results did not indicate TPH-diesel, BTEX or MTBE concentrations above the detection limits at any of the sampling points.

### 3.0 INVESTIGATIVE SCOPE OF WORK

The ACHCSA believed that the lab analysis from October 2006 groundwater sample points and the October 2003 recharge sample, did not accurately reflect the quality of the groundwater within and outside of the former tank excavation, and further believed that the October 2006 informal groundwater gradient determination did not accurately reflect the groundwater gradient at the site. Therefore, this investigative work of installing three groundwater monitoring wells, sampling the groundwater at each well location, as well as sampling the groundwater within the former tank pit excavation, was performed. Groundwater samples and gradient data were obtained by personnel of Dysert Environmental of San Mateo, CA...

Monitoring well MW-1 was placed approximately 10 feet north of the former tank excavation, while monitoring wells MW-2 and MW-3 were placed approximately 10 feet to the west and south, respectively, of the former tank location. The well locations are shown in Figure 2.

### 3.1 Monitoring Well Installation and Groundwater Sampling

Prior to initiating drilling, a subsurface drilling permit was obtained from the Alameda County Public Works Agency (ACPWA). ACHCSA was notified a minimum of 72 hours prior to drilling.

Prior to mobilization of the drill rig on-site, and prior to leaving the site, all associated equipment and well installation equipment was thoroughly cleaned to removed all soil, oil, grease, mud, tar etc. The cleaning process consisted of high pressure steam cleaning of the drilling equipment and a high-pressure hot water final rinse. Before drilling the boring, all drilling equipment was steam-cleaned.

On September 5, 2008, Vironex Inc. of Pacheco, CA, installed three monitoring wells at the locations are shown in Figure 2. A nominal 8-inch diameter boring was advanced using a hollow stem auger. Soils were visually logged and samples collected at approximate five foot intervals. In addition, field instrument and visual observations of petroleum hydrocarbons were noted on the boring logs. The two soil samples were collected from each of the three borings, one from the capillary fringe (approximately 4.5 feet) and from the bottom (approximately 10 feet).

### 3.1.1 Soil Sampling Procedures

Each sample was recovered in a 2 inch diameter by 6 inch long stainless steel sample container, within an 18 inch split spoon sampler. Upon opening the split spoon sampler, the desired sample container was removed and sealed with Teflon sheet and plastic caps. The soil samples were immediately stored on ice. The samples were transported to Accutest Laboratories (Accutest) of Santa Clara, under chain-of-custody procedures.

### 3.1.2 Laboratory Analyses

The following analyses were performed on the samples obtained from the monitoring well borings;

TPH-diesel (TPH C10-C28) (EPA Method 8015B); with silica gel cleanup BTEX and Fuel Oxygenates (EPA Method 8260B)

Analytical results of soil samples recovered from the monitoring well borings were as follows:

TPH/d (TPH C10-C28) Results in Parts Per Million (ppm)
TPH/g (TPH C6-C10) BTEX MTBE Results in Parts Per Billion (ppb)

Sample#	TPH C10-28	TPH C6-10	Benzene	Toluene	E-benzene	Xylenes	Fuel Oxy.
MW1 @4.5'	<5ppm	<25ppb	<1ppb	<1ppb	<1ppb	<2ppb	<10ppb
MW1@10'	<5ppm	<25ppb	<1ppb	<1ppb	<1ppb	<2ppb	<10ppb
MW2 @4.5'	<5ppm	<25ppb	<1ppb	<1ppb	<1ppb	<2ppb	<10ppb
MW2 @10'	<5ppm	<25ppb	<1ppb	<1ppb	<1ppb	<2ppb	<10ppb
MW3 @4.5'	<5ppm	<25ppb	<1ppb	<1ppb	<1ppb	<2ppb	<10ppb
MW3 @10'	<5ppm	<25ppb	<1ppb	<1ppb	<1ppb	<2ppb	<10ppb

### 3.1.3 Monitoring Well Installation

Based on the anticipated highest level groundwater depth of approximately 3.5 feet at the site, the borings were terminated, and the monitor wells constructed, to a depth of approximately 10 feet below ground surface (bgs.). The well casing and screens for the monitor wells were constructed with 2-inch diameter, Schedule 40, flush-joint threaded PVC material. The screens consisted of factory-milled 0.020 inch slots. The screens were installed at the interval from approximately 3.5 to 10 feet below ground surface. A sand pack of clean washed Monterey 2/12 sand was placed adjacent to the entire screened interval and was extended a recommended minimum distance of six inches above the top of the screen. The sand pack was placed by carefully pouring sand down the annulus between the hollow stem and the well casing. The auger was raised periodically and an auger flight removed to allow the sand to fill the annulus between the casing and the borehole wall. Approximately every two feet of sand placement, the well casing was surged using a vented surge block to minimize void spaces in the boring annulus.

A one foot thick bentonite chip seal was placed after the last auger flight was withdrawn from the borehole. The bentonite was hydrated with water at the quantity of 1 gallon per pound of bentonite. The bentonite was hydrated three times and allowed to swell for a minimum of 45 minutes. The annulus above the bentonite seal was grouted with a cement grout. The grout consisted of clean water mixed with Portland cement. The grout was placed after the last auger flight was withdrawn from the borehole. Well completion consisted of a locking PVC cap and subsurface traffic-rated utility box set slightly above grade in concrete.

### 3.2 Monitor Well Development and Sampling

### 3.2.1 Monitor Well Development

On September 7, 2008, the new wells were developed by surging and bailing with clean equipment in order to prepare the well for collection of a representative groundwater sample. Groundwater was pumped from the wells until the water was relatively clear. Water generated during development was stored separately, on-site, in labeled 55gallon drums pending analytical results.

### 3.2.2 Sampling Procedure

On September 16 and 17, 2008, groundwater samples were obtained from monitoring wells MW1 through MW3. Each new monitor well was sampled after the water level had re-equilibrated from development. Groundwater samples were collected as follows:

All groundwater well samples and depth to water measurements were obtained from employees of Dysert Environmental. Each well was pumped until the volume of water withdrawn was equal to at least three casing volumes. To assure that a representative groundwater sample was collected periodic measurements of the temperature, pH and specific conductance were made. The sample was collected only when the temperature, pH, and specific conductance reached relatively constant value and the well had recharged to a minimum of 80% of its per purge volume.

A peristaltic pump was used for evacuating the well casing (purging) of the monitor well. Water samples were also collected using a peristaltic pump. An effort was made to minimize exposure of the sample to air.

Sample containers were obtained directly from the analytical laboratory. To ensure that the analytical laboratory has a sufficient volume of sample for analyses a duplicate sample was collected. Sample containers were labeled with self-adhesive tags.

Subsequent to collection, the samples were immediately stored on ice in an appropriate ice chest. Samples were transported under Chain-of-Custody procedures to Torrent Laboratory Inc. (Torrent) of Milpitas, CA... Individual log sheets were maintained throughout the sampling operations and are contained in the appendix of this report.

Sample bottles, bottle caps, and septa were protected from solvent contact or other contamination. Sampling equipment was cleaned or replaced after its use at each sampling location. Thermometers, pH electrodes, and conductivity probes were also cleaned after sampling of each well.

Care was taken to collect all excess water resulting from the sampling and cleaning procedures. The excess water was contained in a pre-labeled 55-gallon drum on-site pending receipt of laboratory analyses.

### 3.2.3 Laboratory Analyses

The following analyses were performed by Torrent on groundwater samples obtained from monitoring wells MW-1, MW-2 and MW-3:

TPH-diesel (EPA Method 8015M) BTEX,MBTE, Fuel Oxygenates (EPA Method 8260B)

The analytical results were as follows;

### Results in Parts Per Billion (PPB)

Sample# TPH/d Benzene Toluene E-Benzene Xylenes MTBE DIPE ETBE TAME t-Butanol MW1 ND<100 ND<0.5 ND<0.5 ND<0.5 ND<1.5 2.09 ND<0.5 ND<0.5 ND<0.5 ND<10 MW2 ND<100 ND<0.5 ND<1.5 ND<0.5 ND<0.5 ND<0.5 ND<0.5 ND<0.5 ND<0.5 ND<10 ND<0.5 ND<1.5 ND<0.5 ND<0.5 ND<0.5 ND<0.5 ND<10 MW3 ND<100 ND<0.5 ND<0.5

### 3.3 TANK PIT GROUNDWATER GRAB SAMPLE

A groundwater grab sample was then obtained by Dysert Environmental using a ½ inch diameter disposable bailer. An effort was made to minimize exposure of the sample to air. Sample containers were obtained directly from the analytical laboratory. Subsequent to collection, the sample was immediately stored on ice in an appropriate ice chest. Samples were transported under Chain-of-Custody procedures to Torrent Laboratory, Inc. of Milpitas, CA...

On September 16, 2008, a 4 inch diameter core was drilled through the center of the former tank pit. A Campbell Model #S24-60 1.25 inch diameter by 2 foot long well point, coupled to a 5 foot length of stainless steel 1.25 inch well screen, was then manually driven to an approximate depth of 5.5 feet bgs.. The Campbell well point cut sheet is presented in the Appendix of this report.

pit well point:

Total Extractable Petroleum Hydrocarbons (TEPH) (EPA Method CATFH)

The following analyses were performed by Torrent on groundwater sample obtained from the tank

The analytical results were as follows;

LUFT 5 Metals (EPA Method 6010B)

### Results in Parts Per Billion (PPB)

Sample# TPH/d Benzene Toluene E-Benzene Xylenes MTBE DIPE ETBE TAME t-Butanol TankPit ND<100 ND<0.5 ND<0.5 ND<0.5 ND<1.5 ND<1.5 ND<0.5 ND<1.0

TPH/d(EPA Method 8015B), BTEX, MTBE, Fuel Oxygenates (EPA Method 8260B)

Sample# Cadmium Chromium Lead Nickel Zinc TankPit ND<0.5 7 42 25 11,000

### 3.3 Groundwater Gradient Determination

In order to obtain an accurate estimation for groundwater gradient, the top of each well casing was surveyed to an accuracy of 0.01 feet by CSS Environmental Services Inc. (CSS) of Novato Ca., using the Horizontal Coordinate System "North American 1983-CONUS" and Height System "North American Vertical Datum 1988-Ortho.Ht. (GEOID03). The CSS Survey sheet is presented in the Appendix of this report.

Water levels in each of the monitor wells were measured by Dysert on September 16, 2008, prior to sampling activities and within a fifteen minute period. The water surface elevations in the wells were calculated using the survey data. Then, the horizontal hydraulic gradient was calculated based on accurately determined well locations. The gradient calculated indicated a northwestern flow direction at an average gradient of 4.125%. Gradient information is contained in Figure 2.

### 4.0 CONCLUSIONS and RECOMMENDATION

Respectfully submitted this 9th day of October, 2008

It appears that the soil and groundwater at the monitoring well sample points did not contain contaminates of concern above the lab detective limits, with the exception of groundwater sample "MW1" with a trace detection of MTBE.

It further appears that the groundwater at the tank pit sample point did not contain hydrocarbon contaminates above the lab detective limits, but did contain elevated levels of lead, nickel and zinc.

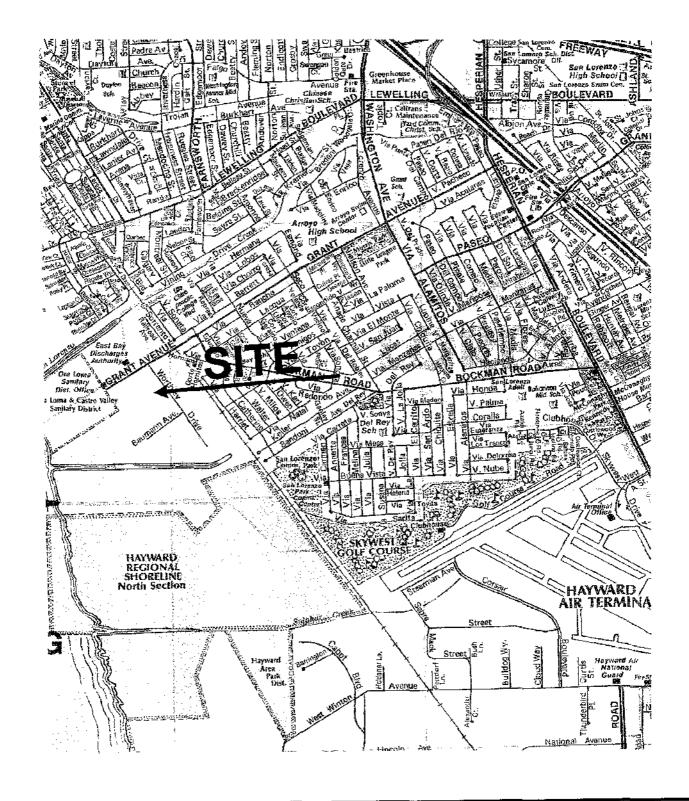
ERS believes these elevated metals are due to the well point used to drive to groundwater. Although advertised to be stainless steel, upon further research after sampling, the well point body was found to be electro-galvanized steel, with a stainless steel screen.

ERS recommends that the groundwater within the former tank pit be re-sampled at the next quarterly event, using an all stainless steel materials, and tested for LUFT 5 metals.

AL AL

Bennett T. Halsted Project Manager Samuel H. Hall ed PE C.E. 14095

# **FIGURES**



## VICINITY MAP

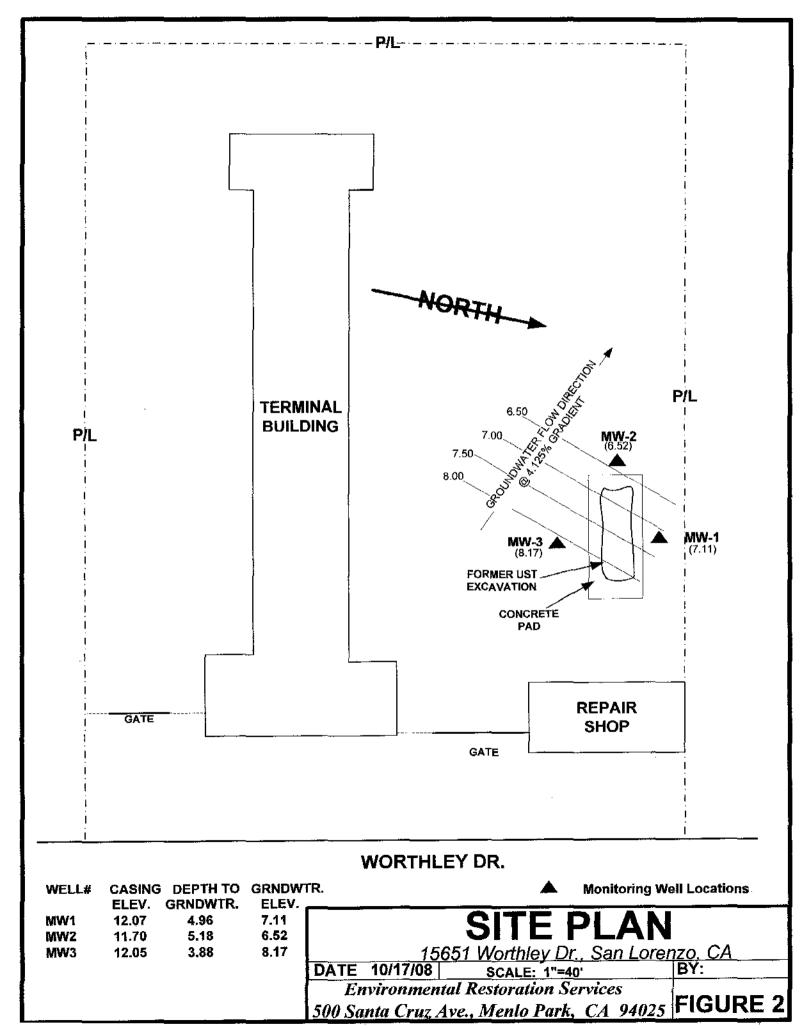
15651 Worthley Dr., San Lorenzo, CA

SCALE: 1"= 0,5 miles

Environmental Restoration Services

PO Box 2006, Menlo Park, CA 94026

FIGURE 1



# **BORING LOGS**

### **Environmental Restoration Services Boring Log** Location: 15651 Worthley Dr., San Lorenzo Date: 9/7/08 Boring No.: MW-1 8" Hollow Stem Logged By: **BTH** Page $\frac{1}{}$ of $\frac{1}{}$ Drill Method: \_\_\_\_\_ Bolted Well/Boring Sample Blow Traffic Sample Completion Lithology Description Cover Count Type No. Detail Asphalt/Baserock Locking Cap Portland CH CLAY, dark grey (10YR 4/1), v. stiff, high plasticity, moist. no Cement odor. 2" Schd. 40 PVC Blank Bentonite silty CLAY, brown (7.5Y 5/4), med. stiff, high/med. plasticity. Chip 5 CL moist, no odor. Soil MW1@4.51 Silty SAND. Fine. 30% silt, 10% clay, med. dense, v. SM moist. Light yellowish brown (10YR6/4). No odor. 2" Schd. 40 ML Low plasticity clayey SILT. 30% clay 15% fine sand. soft, PVC 0.02 screen v. moist. brownish yellow(10YR6/6). No odor. Cemex 2/12 sand CH High Plasticity CLAY v dark grey (5Y3/1), soft, wet, no odor 10 Soil MW1@10' **BOH** 15' 20' 25' 30

### Environmental Restoration Services **Boring Log** Location: 15651 Worthley Dr., San Lorenzo Date: 9/7/08 Boring No.: MW-2 BTH \_\_ Page \_\_1 of \_1 8" Hollow Stem Logged By:\_\_\_\_ Drill Method: \_ Copit? Bolted Well/Boring Traffic Sample Completion Sample **Blow** Lithology Description Cover Detail No. Count Type Asphalt/Baserock Locking Cap Portland CH CLAY, dark grey (10YR 4/1), v. stiff, high plasticity, moist. no Cement odor. 2" Schd. 40 PVC Blank Bentonite silty CLAY, brown (7.5Y 5/4), med. stiff, high/med. plasticity, Chip 5' CL moist, no odor. Soil MW2@4.5' Silty SAND. Fine. 30% silt, 10% clay, med. dense, v. SM moist. Light yellowish brown (10YR6/4). No odor. 2" Schd. 40 ML Low plasticity clayey SILT. 30% clay 15% fine sand. soft, PVC 0.02 screen v. moist. brownish yellow(10YR6/6). No odor. Cemex 2/12 sand CH High Plasticity CLAY v dark grey (5Y3/1), soft, wet, no odor 10 Soil MW2@10' **BOH** 15' 20' 25 30

## **Environmental Restoration Services**

**Boring Log** 

Location: 15651 Worthley Dr., San Lorenzo Date: 9/7/08 Boring No.: MW-3 Page \_\_\_\_\_ of \_\_\_\_ Drill Method: 8" Hollow Stem Logged By: BTH **Bolted** Well/Boring Traffic Sample Blow Sample Completion **Lithology Description** Type Cover Detail Count Asphalt/Baserock Locking Cap Portland CH CLAY, dark grey (10YR 4/1), v. stiff, high plasticity, moist. no Cement odor. 2" Schd. 40 PVC Blank CL Bentonite silty CLAY, brown (7.5Y 5/4), med. stiff, high/med. plasticity, Chip moist, no odor. 5' Soil MW3@4.5 2" Schd. 40 ML Low plasticity clayey SILT, 30% clay 15% fine sand, soft, PVC 0.02 screen v. moist. brownish yellow(10YR6/6). No odor. Cemex 2/12 sand High Plasticity CLAY v dark grey (5Y3/1), soft, wet, 10<sup>|CH</sup> no odor Soil MW3@10' BOH 15' 20 25' **30**'

# WELL PURGE LOGS

DATE: 9-16-08

Well ID; MW = 1

## DYSERT ENVIRONMENTAL, INC. WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT:

Pump Depth

Pump Rate

NOTES: MUNICIPARKED

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SURSED

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ACCESS

Well ID: MW-2

### DYSERT ENVIRONMENTAL, INC. WELL PURGING / SAMPLING DATA



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Well ID: MW-3

## DYSERT ENVIRONMENTAL, INC. WELL PURGING / SAMPLING DATA

Dysert Environmental, Inc.

PROJECT:

SITE LOCATION: 15651 Worthley Drive

DATE: 9-16-08

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	<u>350                                    </u>	- C \	= 0	DEPTH TO		<u> </u>		
SAMPLE APPEARA		<u> </u>	EAR (	100	<u>000</u>			<del></del>
TOTAL GALLONS F	DRGED			(UNS D PARAME	TERS	<u> </u>	<u></u>	
1,	~ 1	U5		T -	<u>,,</u>	1		
CASE VOLUME \	1.0	(1)	2.0	3.0				
рн На	7. المال	7-46	7.56	7.36				
TEMP in °C 2	7.3	27.4	27.4	27.6				
6%	852	652	623	605		<del>-</del>		
							<u> </u>	
<u>DTW 3</u>		3,94	3.98	4-03				
Pump Depth	IFT !							
	OU/							
	Evino!				1		ı	

# CHAIN-OF-CUSTODY **ANALYTICAL RESULTS Soil Samples**









09/16/08



### **Technical Report for**

### **Environmental Restoration Services**

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Accutest Job Number: C2275

Sampling Date: 09/05/08

### Report to:

Environmental Restoration Services 500 Santa Cruz Avenue Menlo Park, CA 94025 envirest@aol.com

ATTN: Ben Halsted

Total number of pages in report: 36





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy Laboratory Director

Client Service contact: Diane Theesen 408 588-0200

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

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### Sample Summary

**Environmental Restoration Services** 

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Job No:

C2275

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
C2275-1	09/05/08	06:54 BH	09/09/08	so	Soil	MW1@4.5
C2275-2	09/05/08	07:21 BH	09/09/08	so	Soil	MW1@10
C2275-3	09/05/08	08:50 BH	09/09/08	so	Soil	MW2@4.5
C2275-4	09/05/08	09:18 BH	09/09/08	so	Soil	MW2@10
C2275-5	09/05/08	11:45 BH	09/09/08	so	Soil	MW3@4.5
C2275-6	09/05/08	12:10 BH	09/09/08	so	Soil	MW3@10

Soil samples reported on a dry weight basis unless otherwise indicated on result page.











Page 1 of 1

Client Sample ID: MW1@4.5

Lab Sample ID: C2275-1

Matrix:

Project:

SO - Soil

Date Sampled: Date Received:

09/05/08 09/09/08

Method: SW846 8015B Percent Solids: n/a a

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Run #1

File ID IK2264.D DF Analyzed 1 09/12/08

By JΑ Prep Date n/a

Prep Batch n/a

Analytical Batch

CJK83

Run #2

Initial Weight

Run #1

5.08 gRun #2

**TPH Volatiles** 

Compound

Result

RL MDL Units

Q

TPH-GRO (C6-C10)

ND

0.098

0.025

mg/kg

CAS No.

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

460-00-4

4-Bromofluorobenzene

109%

60-157%

(a) All results reported on wet weight basis.

ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

MDL - Method Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# **N**

### Report of Analysis

Page 1 of 1

Client Sample ID: MW1@4.5

Lab Sample ID: C2275-1
Matrix: SO - Soll

SO - Soll SW846 8021B Date Sampled: 09/05/08 Date Received: 09/09/08 Percent Solids: n/a a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 JJ2264.D 1 09/12/08 JA n/a n/a GJ83

Run #2

Method:

Initial Weight

Run #1 5.08 g

Run #2

#### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.98	ug/kg	
108-88-3	Toluene	ND	4.9	0.98	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.98	ug/kg	
1330-20-7	Xylenes (total)	ND	9.8	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	25	9.8	ug/kg	
CA\$ No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4	4-Bromofhiorobenzene	108%		60-1	57%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: MW1@4.5

Lab Sample ID: C2275-1

Matrix:

SO - Soil

Date Sampled: Date Received:

09/05/08 09/09/08

Method:

SW846 8015B M SW846 3545A

Percent Solids: n/a a

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID Run #1

DF GG1187.D 1

Analyzed Ву 09/10/08 JH Prep Date 09/10/08

Prep Batch **OP347** 

**Analytical Batch** 

**GGG53** 

Run #2

Initial Weight

Final Volume

Run #1 10.2 g 1.0 ml

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No. Compound Result

RL

MDL Units Q

TPH (C10-C28)

ND

9.8

mg/kg

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

4.9

630-01-3

Hexacosane

81%

45-140%

(a) All results reported on wet weight basis.

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: MW1@10

Lab Sample ID:

C2275-2

Matrix:

SO - Soil

Date Sampled: Date Received:

09/05/08 09/09/08

Method:

SW846 8015B

DF

1

Percent Solids:

n/a a

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Analyzed

09/12/08

Prep Date

n/a

Prep Batch

n/a

Analytical Batch CJK83

Run #1 Run #2

Initial Weight

File ID

5.07 g

JK2265.D

Run #1

Run #2

**TPH Volatiles** 

CAS No. Compound Result

RL

Ву

JΑ

MDL

0.025

Units

Q

TPH-GRO (C6-C10)

ND

0.099

mg/kg

CAS No. 460-00-4

Surrogate Recoveries

4-Bromofluorobenzene

Run# 1

103%

Run# 2 Limits

60-157%

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: MW1@10

Lab Sample ID: Matrix:

C2275-2

SO - Soil

Date Sampled:

09/05/08

Date Received: SW846 8021B

09/09/08 Percent Solids: n/a a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch II2265.D 1 09/12/08 JA n/a GJJ83 Run #1 n/a

Run #2

Method:

Initial Weight

5.07~gRun #1

Run #2

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.99	ug/kg	
108-88-3	Toluene	ND	4.9	0.99	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.99	ug/kg	
1330-20-7	Xylenes (total)	ND	9.9	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	25	9.9	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4	4-Bromofluorobenzene	106%		60-1	.57%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

**Analytical Batch** 

GGG53

Client Sample ID: MW1@10 C2275-2

Lab Sample ID: Matrix:

SO - Soil

DF

1

Date Sampled:

09/05/08

Prep Batch

OP347

Date Received: 09/09/08 Percent Solids: n/a a

Method: Project:

SW846 8015B M SW846 3545A

Analyzed

09/10/08

Prep Date

09/10/08

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

By

Ш

Run #1 Run #2

> Final Volume Initial Weight

Run #1

10.3 g

File ID

GG1188.D

1.0 ml

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No. Result RL MDL Compound Units Q

TPH (C10-C28) b

ND

9.7 4.9

mg/kg

CAS No. Surrogate Recoveries Run#1

Run# 2

Limits

630-01-3 Hexacosane

68%

45-140%

(a) All results reported on wet weight basis.

(b) In addition, the sample contains 30 mg/Kg Motor Oil .

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



By

JΑ

Page 1 of 1

Client Sample ID: MW2@4.5

Lab Sample ID:

C2275-3

SO - Soil

Date Sampled: Date Received:

Matrix: Method:

SW846 8015B

Percent Solids:

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Run #1

File ID DF JK2269.D 1

Analyzed 09/12/08

Prep Date n/a

Prep Batch n/a

09/05/08

09/09/08

 $n/a^a$ 

**Analytical Batch** 

GJK83

Run #2

Initial Weight

Run #1

5.14 g

Run #2

TPH Volatiles

Compound

Result

RL

MDL

Units

Q

TPH-GRO (C6-C10)

ND

0.097

0.024

mg/kg

CAS No.

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

460-00-4

4-Bromofluorohenzene

102%

60-157%

(a) All results reported on wet weight basis.

ND = Not detected

RL = Reporting Limit E - Indicates value exceeds calibration range

MDL - Method Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

Page 1 of 1

Client Sample ID: MW2@4.5

Lab Sample ID:

C2275-3

SO - Soil

Date Sampled:

09/05/08

Matrix: Method:

SW846 8021B

DF

1

Date Received: Percent Solids: n/a a

09/09/08

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Analyzed

09/12/08

Run #1

File ID JJ2269.D By JA

Prep Date n/a

Prep Batch n/a

**Analytical Batch** GJ[83

Run #2

Initial Weight

Run #1

5.14 g

|Run #2

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.97	ug/kg	
108-88-3	Toluene	ND	4.9	0.97	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.97	ug/kg	
1330-20-7	Xylenes (total)	ND	9.7	1.9	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	24	9.7	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4	4-Bromofluorobenzene	1 <b>02</b> %		60-1	57%	

(a) All results reported on wet weight basis.

ND = Not detected

MDI. - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: MW2@4.5

Lab Sample ID:

C2275-3

SO - Soil

Date Sampled:

09/05/08

Matrix: Method:

SW846 8015B M SW846 3545A

Date Received: Percent Solids:

09/09/08 n/a a

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Analyzed

09/10/08

Run #1

File ID GG1189.D DF 1

By Ш Prep Date 09/10/08

Prep Batch **OP347** 

**Analytical Batch** 

**GGG53** 

Run #2

Initial Weight 10.1 g

Final Volume

Run #1 Run #2 1.0 ml

TPH Extractable w/ Silica Gel Cleanup

Compound

CAS No.

Result

RL

MDL

Units

Q

TPH (C10-C28)

ND

9.9

5.0

mg/kg

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

630-01-3

Hexacosane

75%

45-140%

(a) All results reported on wet weight basis.

ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

MDL - Method Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: MW2@10

Lab Sample ID:

C2275-4

SO - Soil

09/05/08 Date Sampled:

Matrix: Method:

SW846 8015B

Date Received: 09/09/08 Percent Solids: n/a a

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Analyzed

09/12/08

Run #1

File ID JK2270.D

5.10 g

DF 1

Ву JΑ

Prep Date ıı/a

Prep Batch n√a

**Analytical Batch** 

GJK83

Run #2

Initial Weight

Run #1

Run #2

TPH Volatiles

CAS No. Compound Result

RL

MDL

Units

Q

TPH-GRO (C6-C10)

ND

0.098

0.025

mg/kg

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

460-00-4

4-Bromofluorobenzene

109%

60-157%

(a) All results reported on wet weight basis.

ND - Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



# of 1

### Report of Analysis

Page 1 of 1

Client Sample ID: MW2@10

Lab Sample ID: C2275-4

Matrix: Method:

Project:

SO - Soil SW846 8021B Date Sampled: 09/05/08 Date Received: 09/09/08

n/a a

Percent Solids:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 JJ2270.D 1 09/12/08 JA n/a n/a GJ83

Run #2

Initial Weight

Run #1 5.10 g

Run #2

### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	0.98	ug/kg	
108-88-3	Toluene	ND	4.9	0.98	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	0.98	ug/kg	
1330-20-7	Xylenes (total)	ND	9.8	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	25	9.8	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4	4-Bromofluorobenzene	108%		60-1	57%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL - Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



#### Report of Analysis

By

JΗ

Page 1 of 1

Client Sample ID: MW2@10

File ID

GG1190.D

Lab Sample ID: C2275-4

Matrix:

SO - Soil

SW846 8015B M SW846 3545A

Date Sampled:

09/05/08

Date Received:

09/09/08

n/a a Percent Solids:

Method: Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Analyzed

09/10/08

Prep Date

09/10/08

Prep Batch **Analytical Batch** 

**OP347** GGG53

Run #1 Run #2

Initial Weight Final Volume

Run #1 10.4 g 1.0 ml

DF

1

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No. Compound Result

RL

MDL Units

Q

TPH (C10-C28)

ND

9.6

4.8

mg/kg

CAS No.

Surrogate Recoveries

Run# 1

Run#2

Limits

630-01-3

Hexacosane

70%

45-140%

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# 2

### Report of Analysis

JA

Page 1 of 1

Client Sample ID: MW3@4.5

Lab Sample ID:

C2275-5

1

SO Soil

Date Sampled: Date Received:

09/05/08 09/09/08

n/a a

Matrix: Method: Project:

SW846 8015B Percent Solids: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date

09/12/08

Prep Batch Analytical Batch n/a GIK83

Run #1 Run #2

Initial Weight

JK2271.D

Run #1

CAS No.

5.02 g

Run #2

**TPH Volatiles** 

Compound Result RL MDL Units Q

TPH-GRO (C6-C10)

ND

0.10

0.025

n/a

mg/kg

CAS No. Surrogate Recoveries

Run#1

Run# 2

Limits

460-00-4

4-Bramofluorobenzene

106%

60-157%

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

 $\mathcal{U} =$ Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# 2

#### Report of Analysis

Page 1 of 1

Client Sample ID: MW3@4.5

Lab Sample ID: C2275-5

Matrix:

SO - Soil SW846 8021B Date Sampled: 09/05/08 Date Received: 09/09/08

Percent Solids: n/a a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 JJ2271.D 1 09/12/08 JA n/a n/a GJJ83

Run #2

Method:

Initial Weight

Run #1 5.02 g

Run #2

#### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL .	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
1330-20-7	Xylenes (total)	ND	10	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	25	10	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4	4-Bromofluorobenzene	103%		60-1	57%	

(a) All results reported on wet weight basis.

ND = Not detected

MDI. - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



### Report of Analysis

Page 1 of 1

Client Sample ID: MW3@4.5

Lab Sample ID: C2275-5

Matrix: Method: SO - Soil

SW846 8015B M SW846 3545A

Date Sampled: Date Received:

45-140%

09/05/08 09/09/08

Percent Solids: n/a a

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 GC1192.D I 09/10/08 JH 09/10/08 OP347 GGG53

Run #2

Run #2

630-01-3

Project:

Initial Weight Final Volume

Run #1 10.3 ;

10.3 g

1.0 ml

TPH Extractable w/ Silica Gel Cleanup

CAS No. Compound Result RL MDL Units Q TPH (C10-C28) ND 9.7 4.9mg/kg Run# 2 Run# 1 Limits CAS No. Surrogate Recoveries

81%

55 (40, Suffogate Recoveries Rulls 1 Rulls 2 Dillit

(a) All results reported on wet weight basis.

Hexacosane

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



### Report of Analysis

Page 1 of 1

Client Sample ID: MW3@10

Lab Sample ID: C2275-6

Matrix: Method: SO Soil SW846 8015B Date Sampled: Date Received:

Percent Solids: n/a a

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID Run #1

JK2272.D

DF Analyzed 1 09/12/08

By JA Prep Date n/a

Prep Batch n/a

09/05/08

09/09/08

Analytical Batch

GJK83

Run #2

Initial Weight

Run #1 5.00 g

Run #2

TPH Volatiles

CAS No. Compound Result

RL

MDL Units

Q

TPH-GRO (C6-C10)

ND

0.10

0.025

mg/kg

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

460-00-4

4-Bromofluorobenzene

108%

60-157%

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# 2.6 2

#### Report of Analysis

Page 1 of 1

Client Sample ID: MW3@10

Lab Sample ID:

C2275-6

Date Sampled: 09/05/08 Date Received: 09/09/08

Matrix: Method: SO - Soil SW846 8021B

Percent Solids: n/a a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 JJ2272.D 1 09/12/08 JA n/a n/a GJJ83

Run #2

Initial Weight

Run #1 5.00 g

Run #2

#### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene	ND ND ND	5.0 5.0 5.0	1.0 1.0 1.0	ug/kg ug/kg ug/kg	
1330-20-7 1634-04-4	1330-20-7 Xylenes (total)		10 25	2.0 ug/kg 10 ug/kg		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	. Lim	nits	
460-00-4	4-Bromofluorobenzene	112%		60-1	157%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B - Indicates analyte found in associated method blank



#### Report of Analysis

Page 1 of 1

Client Sample ID: MW3@10

Lab Sample ID: C2275-6

Date Sampled:

09/05/08

Matrix: Method: SO - Soil

1

Date Received:

09/09/08

Project:

SW846 8015B M SW846 3545A Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Percent Solids: n/a a

Run #1

File ID GG1215.D DF Analyzed 09/12/08

By Prep Date IH 09/10/08

Prep Batch **OP347** 

Analytical Batch GGG55

Run #2

Initial Weight

10.0 g

Final Volume  $1.0 \, \mathrm{ml}$ 

Run #1

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No. Compound Result

RL

MDL

Units

Q

TPH (C10-C28)

ND

10

5.0 mg/kg

CAS No.

Surrogate Recoveries

Run# 1

Run#2

Limits

630-01-3

Hexacosane

83%

45-140%

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank













Misc.	<b>Forms</b>
1111004	T OTHIO

# **Custody Documents and Other Forms**

Includes the following where applicable:

- Chain of Custody



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Northern California	CHAIN			DY	16046811	ableh D			Seeing creder Colores		
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C2275: Chain of Custody

Page 1 of 2





# Sample Receiving Checklist

Job# C2275

Review Chain of Cu				libly filed out by Client	
	atory (NPDES) sample			pil requested? Yes / i	
				did they consent to confin	:u <b>e</b> 7
	iln one-half höld-time?		e If no, was the la	b informed?	····
	complate and legible.				•
	eliverabie neaded 👊		٠	مسيد للمستدن المستدن	
•		-		itact d'address diphone	e pernail
☐ Contact and/or f	Project Mgr identified,	Including; 🗈 phone	e cemali	:	
<ul> <li>Project name / r</li> </ul>	number o <b>Special</b> req	uirements?Yes .	No ctrde one		
a _Şampie IDs / da	te & time of collection	provided?(Yes) / N	a circle one		
<ul> <li>Matrix listed and</li> </ul>	correct? (Yes)! No	circle one	-16.		•
B Analyses listed a	are those we do <del>er ella</del>	<del>nt has aidhorbed a</del> :	upcombect? (Yes	I No drole one	••
æ Chain is signed ₁	dated by both dient a	and sample custodia:	? Yeshi No dreis	one	•
<ul> <li>TAT requested a</li> </ul>	vailable? Approved!	ΣΥ	7	•	
Review Coolers;	•			•	
n Samples / Coolers	are at 0-6°C?	tf sampled witt	in 4 hrs, then "on it	co is acceptable	*
If a cooler is outsid	is the 0-6°C range; no	te below the bottles !	n that cooler below		
Note that ANC doe	s NOT accept evide n	tary samples, (We di	o not lock refrigeret	iors) 🍜	
Shipment Method:					
Custody Seals	Present Yes	/ No circle ans	Un-broken: 1	Yes / No circle one	
	ittles: If you answer n				
De / bottle numb	er / Date / Time of boi	tle labels match Coo	7		
n Sample bottle int	ad? Yes / Moodud	e pne			
p Proper container	s and volumes? (Yes	No circle one			
			ept 1664, 625, 827	0, and VOAs and list below	N.
<ul> <li>VOAs received w</li> </ul>	ithout headspace? Y	es / No circle one			
		<del></del>			<del></del>
Lab#	Client Sample ID	DH Check:	.01	iber Comments / Issues	- 1

Lab#	Client Sample ID	pH Check:	Other Comments / Issues
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C2275: Chain of Custody Page 2 of 2

Client informed of irregularities at receiving
Comments:

Project Mgr needs to contact Client for Issues

:TALaboratory/FormstSampleControl/Form\_SampleReceiving\_2008-04-12.doc











#### **GC Volatiles**

### **QC Data Summaries**

#### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summarics
- · Matrix Spike and Duplicate Summaries



Job Number:

C2275

**ERSCAMP Environmental Restoration Services** 

Account: Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sam	ple	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch	
GJK	83-MB	JK2241.D	1	09/11/08	JA	n/a	n/a	GJK83	
[									

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The QC reported here applies to the following samples:

Method: SW846 8015B

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

 CAS No.
 Compound
 Result
 RL
 MDL
 Units
 Q

 TPH-GRO (C6-C10)
 ND
 0.10
 0.025
 mg/kg

CAS No. Surrogate Recoveries

Limits

460-00-4 4-Bromofluorobenzene 103% 60-157%

Method Blank Summary

Page 1 of 1

Job Number: Account:

C2275

**ERSCAMP Environmental Restoration Services** 

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GJJ83-MB	JJ2241.D	1	09/11/08	JA	n/a	n/a	GJJ83

The QC reported here applies to the following samples:

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

Method: SW846 8021B

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2 100-41-4 1634-04-4 108-88-3 1330-20-7	Benzene Ethylbenzene Methyl Tert Butyl Ether Toluene Xylenes (total)	ND ND ND ND	5.0 5.0 25 5.0 10	1.0 1.0 10 1.0 2.0	ug/kg ug/kg ug/kg ug/kg ug/kg

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	101%	60-157%



Account:

ERSCAMP Environmental Restoration Services

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch	
GJK83-BS	JK2244.D	1	09/11/08	JA	n/a	n/a	GJK83	
GJK83-BSD	JK2245.D	1	09/11/08	JA	n/a	n/a	GJK83	

The QC reported here applies to the following samples:

Method: SW846 8015B

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	1	0.753	75	0.737	74	2 .	65-135/30
CAS No.	Surrogate Recoveries	BSP	BSI	<b>)</b>	Limits			
460-00-4	4-Bromofluorobenzene	103%	111	%	60-157%	ó		

### Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: Account:

r: C2275

**ERSCAMP Environmental Restoration Services** 

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample CJJ83-BS GJJ83-BSD	File ID JJ2242. D JJ2243. D	<b>DF</b> 1	Analyzed 09/11/08 09/11/08	By JA JA	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch GJJ83 GJJ83

The QC reported here applies to the following samples:

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

Method: SW846 8021B

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	54.9	110	54.8	110	0	65-135/30
100-41-4	Ethylbenzene	50	53.5	107	53.4	107	0	65-135/30
1634-04-4	Methyl Tert Butyl Ether	50	53.2	106	51.3	103	4	65-135/30
108-88-3	Toluene	50	51.3	103	50.9	102	1	65-135/30
1330-20-7	Xylenes (total)	150	162	108	162	108	0	65-135/30
CAS No.	Surrogate Recoveries	BSP	BSi	D	Limits			
460-00-4	4-Bromofluorobenzenc	103%	105	%	60-1579	%		



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### Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: Account:

C2275

**ERSCAMP Environmental Restoration Services** 

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	A==b+:-170-4-h
		Dr.		•	, •		Analytical Batch
C2295-2MS	JK2262.D	1	09/12/08	JA	n/a	n/a	GJK83
C2295-2MSD	JK2263.D	1	09/12/08	JΑ	n/a	n/a	GJK83
C2295-2	JK2247.D	1	09/11/08	JΑ	n/a	n/a	GJK83
	•			_			_
J							

The QC reported here applies to the following samples:

Method: SW846 8015B

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

CAS No.	Compound	C2295-2 mg/kg Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	0.977	0.686	70	0.646	65	6	65-135/25
CAS No.	Surrogate Recoveries	MS	MSD	C22	295-2	Limits			
460-00-4	4-Bromofluorobenzene	117%	113%	106	%	60-1579	6		



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### Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number:

C2275 Account:

**ERSCAMP Environmental Restoration Services** 

Project:

Trans. Terminals - 15651 Worthley Drive, Sau Lorenzo, CA

C2295-1MSD JJ	1	DF Analyzed By DDF 09/12/08 JA D 1 09/12/08 JA D 1 09/11/08 JA	Prep Date n/a n/a n/a	Prep Batch n/a n/a n/a	Analytical Batch GJJ83 GJJ83 GJJ83
---------------	---	--	--------------------------------	---------------------------------	---

The QC reported here applies to the following samples:

Method: SW846 8021B

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

			_						
CAS No.	Compound	C2295-1 ug/kg Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	48.7	48.8	100	47.5	97	3	65-135/25
100-41-4	Ethylbenzene	ND	48.7	46.7	96	45.8	94	2	65-135/25
1634-04-4	Methyl Tert Butyl Ether	ND	48.7	46.7	96	45.3	93	3	65-135/25
108-88-3	Toluene	ND	48.7	45.6	94	44.5	91	2	65-135/25
1330-20-7	Xylenes (total)	ND	146	140	96	138	94	1	65-135/25
CAS No.	Surrogate Recoveries	MS	MSD	C2:	295-1	Limits			
460-00-4	4-Bromofluorobenzene	106%	107%	108	8%	60-1579	%		









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# **QC** Data Summaries

### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Job Number:

: C2275

Account: ERS

**ERSCAMP Environmental Restoration Services** 

Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample File ID D₽ Analyzed Bv Prep Date Prep Batch Analytical Batch OP347-MB JΉ 09/09/08 HH819.D 09/09/08 OP347 1 GHH50

The QC reported here applies to the following samples:

Method: SW846 8015B M

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

CAS No. Compound Result RL MDL Units Q
TPH (C10-C28) ND 10 5.0 mg/kg

CAS No. Surrogate Recoveries

Limits

630-01-3 Hexacosane

75% 45-140%



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Job Number:

C2275

**ERSCAMP** Environmental Restoration Services

Account: Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample OP347-BS	File ID HH820.D	DF 1	Analyzed 09/09/08	By IH	Prep Date 09/09/08	Prep Batch OP347	Analytical Batch GHH50	
OP347-BSD	HH821.D	1	09/09/08	JH	09/09/08	OP347	GHH50	

The QC reported here applies to the following samples:

Method: SW846 8015B M

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	ТРН (С10-С28)	100	64.2	64	70.5	71	9	45-140/30
CAS No.	Surrogate Recoveries	BSP	BSI	•	Limits			
630-01-3	Hexacosane	72%	77%	· •	45-140%	ó		



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# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number:

C2275

ERSCAMP Environmental Restoration Services

Account: Project:

Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

C2255-5 HH825.D 1 09/09/08 JH 09/09/08 OP347 GHH50	Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
	OP347-MS	HH845.D	1	09/10/08	JH	09/09/08	OP347	GHH50
	OP347-MSD	HH846.D	1	09/10/08	JH	09/09/08	OP347	GHH50
	C2255-5	HH825.D	1	09/09/08	JH	09/09/08	OP347	GHH50

The QC reported here applies to the following samples:

Method: SW846 8015B M

C2275-1, C2275-2, C2275-3, C2275-4, C2275-5, C2275-6

CAS No.	Compound	C2255-5 mg/kg Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND	100	60.5	61	64.8	65	7	45-140/30
CAS No.	Surrogate Recoveries	MS	MSD	C22	255-5	Limits			
630-01-3	Hexacosane	79%	75%	76%	б	45-140%	•		



# CHAIN-OF-CUSTODY **ANALYTICAL RESULTS Groundwater Samples**



September 26, 2008

Ben Halsted **Environmental Restoration Services** 15651 Worthley Drive San Lorenzo, CA, CA

TEL: (650) 799-9204

FAX

RE: 0315

Dear Ben Halsted:

Order No.: 0809124

Torrent Laboratory, Inc. received 4 samples on 9/17/2008 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Reported data is applicable for only the samples received as part of the order number referenced above.

Torrent Laboratory, Inc., is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

09-26-08 Date



# TORRENT LABORATORY, INC.

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

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

Report prepared for: Ben Halsted

**Environmental Restoration Services** 

Date Received: 9/17/2008

Date Reported: 9/26/2008

Client Sample ID:

MW-1

**Lab Sample ID:** 0809124-001

Sample Location:

15651 Worthley Dr,San Lorenzo

Date Prepared: 9/26/2008

Sample Matrix:

WATER

Date/Time Sampled

9/17/2008 9:30:00 AM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel-SG)	SW8015B	9/19/2008	0.1	1	0.100	ND	mg/L	R17407
Surr: Pentacosane	SW8015B	9/19/2008	0	1	64.2-123	91.0	%REC	R17407
Benzerie	SW8260B	9/26/2008	Ų. <b>5</b>	1	0.500	ND	µg/L	R1/429
Diisopropyl ether (DtPE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethyl tert-butyl ether (ETBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethylbenzene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Methyl tert-butyl ether (MTBE)	SW8260B	9/26/2008	0.5	1	0.500	2.09	µg/L	R17429
t-Butyl alcohol (t-Butanol)	SW8260B	9/26/2008	10	1	10.0	ND	μg/L	R17429
tert-Amyl methyl ether (TAME)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Toluene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/l,	R17429
Xylenes, Total	SW8260B	9/26/2008	1.5	1	1.50	ND	μg/L	R17429
Surr: Dibromofluoromethane	SW8260B	9/26/2008	0	1	61.2-131	80.8	%REC	R17429
Surr: 4-Bromofluorobenzene	SW8260B	9/26/2008	0	1	64.1-120	117	%REC	R17429
Surr: Toluene-d8	SW8260B	9/26/2008	0	1	75.1-127	118	%REC	R17429

Report prepared for: Ben Halsted

**Environmental Restoration Services** 

Date Received: 9/17/2008

Date Reported: 9/26/2008

Clicat Sample ID:

MW-2

15651 Worthley Dr,San Lorenzo

**Lab Sample ID:** 0809124-002 **Date Prepared:** 9/26/2008

Sample Location: Sample Matrix:

WATER

Date/Time Sampled

9/16/2008 3:21:00 PM

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel-SG)	SW8015B	9/19/2008	0.1	1	0.100	ND	mg/L	R17407
Surr: Pentacosane	SW8015B	9/19/2008	0	1	64.2-123	83.5	%REC	R17407
Benzene	SW8260B	9/26/2008	0.5	1	0.500	ND	µg/i.	R17 <b>42</b> 9
Diisopropyl ether (DIPE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethyl tert-butyl ether (ETBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethylbenzene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Methyl tert-butyl ether (MTBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
t-Butyl alcohet (t-Butanol)	SW8260B	9/26/2008	10	1	10.0	ND	µg/L	R17429
tert-Amyl methyl ether (TAME)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Toluene	SW8260B	9/26/2008	0.5	1	0.500	ND	₽g/L	R17429
Xylenes, Total	SW8260B	9/26/2008	1.5	1	1.50	ND	μg/L	R17429
Sum: Dibromofluoromethane	SW8260B	9/26/2008	0	1	61.2-131	112	%REC	R17429
Surr: 4-Bromofluorobenzene	SW8260B	9/26/2008	0	1	64.1-120	104	%REC	R17429
Surr: Toluene-d8	SW8260B	9/26/2008	0	1	75.1-127	101	%REC	R17429

Report prepared for: Ben Halsted

**Environmental Restoration Services** 

**Date Received:** 9/17/2008 **Date Reported:** 9/26/2008

Lab Sample ID: 0809124-003

Client Sample ID:

MW-3

Sample Location:

15651 Worthley Dr,San Lorenzo

Date Prepared: 9/26/2008

Sample Matrix:

WATER

**Date/Time Sampled** 9/16/2008 1:50:00 PM

		·						
Parameters	Апаlysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
TPH (Diesel-SG)	SW8015B	9/19/2008	0.1	1	0.100	ND	mg/L	R17407
Surr: Pentacosane	SW8015B	9/19/2008	0	1	64.2-123	79.0	%REC	R17407
Benzene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Diisopropyl ether (DIPE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethyl tert-butyl ether (ETBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethylberizene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Methyl tert-butyl ether (MTBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
t-Butyl alcohol (t-Butanol)	SW8260B	9/26/2008	10	1	10.0	ND	μg/L	R17429
tert-Amyl methyl ether (TAME)	SW8260B	9/26/2008	0.5	1	0.500	ND	μ <b>g/</b> l	R17429
Toluene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Xylenes, Total	SW8260B	9/26/2008	1.5	1	1.50	ND	μg/L	R17429
Surr: Dibromofluoromethane	SW82608	9/26/2008	0	1	61.2-131	93.6	%REC	R17429
Surr: 4-Bromofluorobenzene	SW8260B	9/26/2008	0	1	64.1-120	103	%RFC	R17429
Surr: Toluene-d8	SW8260B	9/26/2008	0	1	75.1-127	93.3	%REC	R17429

Report prepared for: Ben Halsted

Environmental Restoration Services

Date Received: 9/17/2008

Date Reported: 9/26/2008

**Lab Sample ID:** 0809124-004

Date Prepared: 9/19/2008

Client Sample ID:

Tank Pit

Sample Location:

15651 Worthley Dr,San Lorenzo

15051

Sample Matrix:

WATER

Date/Time Sampled

9/16/2008 12:41:00 PM

Parameters	Analysis Method	Date Analyzed	RI,	Dilution Factor	MRL	Result	Units	Analytica Batch
Cadmium	SW6010B	9/20/2008	0.005	1	0.0050	ND	mg/L	4608
Chromium	SW6010B	9/20/2008	0.005	1	0.0050	0.0070	mg/L	4608
Lead	SW6010B	9/20/2008	0.015	1	0.015	0.042	mg/L	4608
Nickel	SW6010B	9/20/2008	0.01	1	0.010	0.025	mg/L	4608
Zinc	SW6010B	9/20/2008	0.005	1	0.0050	11	mg/L	4608
TPH (Diesel-SG)	SW8015B	9/19/2008	0.1	1	0.233	NĐ	mg/L	R17407
Sum: Pentacosane	SW8015B	9/19/2008	0	1	64.2-123	78.0	%REC	R17407
Note: Reporting limits increased due to	o limited sample availa	ble.						
Benzene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17 <b>42</b> 9
Diisopropyl ether (DIPE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Ethyl tert-butyl ether (ETBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	µg/L	R17429
Ethylbenzene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Methyl tert-butyl ether (MTBE)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
t-Butyl alcohol (t-Butanol)	SW8260B	9/26/2008	10	1	10.0	ND	μg/L	R17429
tert-Amyl methyl ether (TAME)	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Toluene	SW8260B	9/26/2008	0.5	1	0.500	ND	μg/L	R17429
Xylenes, Total	SW8260B	9/26/2008	1.5	1	1.50	ND	μg/L	R17429
Surr: Dibromofluoromethane	SW8260B	9/26/2008	0	1	61.2-131	95.0	%REC	R17429
Surr: 4-Bromofluorobenzene	SW8260B	9/26/2008	0	1	64.1-120	96.7	%REC	R17429
Surr: Toluene-d8	SW8260B	9/26/2008	0	1	75.1-127	88.3	%REC	R17429

#### Definitions, legends and Notes

Note	<u>Description</u>	
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/lahoratory 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	э.
sub	Analyzed by subcontracting laboratory, Lab Certificate #	

Date: 26-Sep-08

**Environmental Restoration Services** 

Work Order: 0809124

Project:

CLIENT:

0315

#### ANALYTICAL QC SUMMARY REPORT

Batch ID: 4608

Sample ID Client ID:	MB-4608 ZZZZZ	SampType: Batch ID:			le: 6010B_W lo: SW6010B	Units: mg/L (E200.7/SW3		Prep Dat Analysis Dat			RunNo: <b>17</b> 3 SeqNo: <b>24</b> 8		
Analyte			Result	PQL		SPK Ref Val	%REC	•		RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium			ND	0.0050									
Chromium			ND	0.0050									
Lead			ND	0.015									
Nickel			ND	0.010									
Zinc			ND	0.010									
Sample ID	LCS-4608	SampType:	LCS	TestCod	de: <b>6010B_W</b>	Units: mg/L		Prep Dat	e: 9/19/20	008	RunNo: 17	883	
Client ID:	<u> 77777</u>	Batch ID:	4608	Test <b>N</b>	io: SW6010B	(E200.7/SW3		Analysis Dat	e: <b>9/20/2</b> 0	800	SeqNo: 24	3900	
Analyte	Result PQL SPK value S				SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua	
Cadmium			0.9880	0.0050	1	0.001	98.7	80	120				
Chromium	,		1.025	0.0050	1	0	103	80	120				
Lead			1.011	0.015	1	a	101	80	120				
Nickel			1.015	0.010	1	0	102	80	120				
Zinc			1.044	0.010	1	0.006	104	80	120				
Sample ID	LCSD-4608	SampType:	LCSD	TestCod	de: 6010B_W	Units: mg/L		Prep Dat	e: 9/19/20	008	RunNo: 17	383	
Client ID:	<b>7777</b>	Batch ID:	4608	Test	lo: SW6010B	(E200.7/SW3		Analysis Dat	e: <b>9/20/2</b> (	00B	SeqNo: 24	3901	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Cadmium	<u> </u>		0.9770	0.0050	1	0.001	97.6	80	120	0.988	1,12	20	
Chromium			1.017	0.0050	1	0	102	80	120	1,025	0.784	20	
Lead			0.9950	0.015	1	0	99.5	80	120	1,011	1.60	20	
Nickel			1.013	0.010	1	0	101	80	120	1.015	0.197	20	
MICKEL			1.041	0.010	4	0.006	104	80	120	1.044	0.288	20	

#### Value above quantitation range Not Detected at the Reporting Limit

Qualifiers;

**Environmental Restoration Services** 

Work Order:

0809124

Project:

0315

ANALYTICAL QC SUMMARY REPORT

BatchID:	4608
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Sample ID 0809124-004AMS	SampType: MS	TestCod	de: 6010B_W	Units: mg/L		Prep Dat	e: 9/19/20	008	RunNo: 173	383	
Client iD: Tank Pit	Batch ID: 4608	Test	No: <b>SW6010B</b>	(E200.7/SW3		Analysis Da	e: 9/20/20	008	SeqNo: 248	3896	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.9090	0.0050	1	0.003	90.6	75	125				
Chromium	0.9540	0.0050	1	0.007	94.7	75	125				
Lead	1.002	0.015	1	0.042	96.0	75	125				
Nickel	0.9360	0.010	1	0.025	91.1	75	125				
				44.00	82.0	75	125				
Zinc	12.04	0.010	1	11.22	02.0	75	120				
<del> </del>			1 de: <b>6010B_W</b>	=	02.0	Prep Da		)OB	RunNo: 173	383	<del> </del>
Zinc Sample ID 0809124-004AMSC Client ID: Tank Pit		†estCo		Units: mg/L		<u></u>	e: 9/19/20		RunNo: 173 SeqNo: 248		<del>.</del>
Sample ID	SampType: MSD	†estCo	de: <b>6010B_W</b>	Units: mg/L		Prep Da	e: 9/19/20				Qual
Sample ID 0809124-004AMSD	SampType: MSD Batch ID: 4608	TestCo	de: 6010B_W No: SW6010B	Units: mg/L (E200.7/SW3	11. 11. 11.	Prep Da Analysis Da	e: 9/19/20	008	SeqNo: 248	3897	Qual
Sample ID 0809124-004AMSD Client ID: Tank Pit Analyte	SampType: MSD Batch ID: 4608 Result	TestCoo Testi PQL	de: 6010B_W No: SW6010B SPK value	Units: mg/L (E200.7/SW3 SPK Ref Val	%REC	Prep Da Analysis Da LowLimit	e: 9/19/20 e: 9/20/20 HighLimit	RPD Ref Val	SeqNo: 248	8897 RPDLimit	Qual
Sample (D. 0809124-004AMSD Client ID: Tank Pit Analyte Cadmium Chromium	SampType: MSD Batch ID: 4608 Result 0.9040	TestCod TestI PQL 0,9050	de: 6010B_W No: SW6010B SPK value	Units: mg/L (E200.7/SW3 SPK Ref Val 0.003	%REC 90.1	Prep Da Analysis Da LowLimit 75	e: 9/19/20 e: 9/20/20 HighLimit	RPD Ref Val 0.909	SeqNo: <b>248</b> %RPD 0.552	38 <b>97</b> RPDLimit 30	Qual
Sample (D. 0809124-004AMSD Client ID: Tank Pit Analyte Cadmium	SampType: MSD Batch ID: 4608 Result 0.9040 0.9570	TestCod TestI PQL 0.9050 0.0050	de: 6010B_W No: SW6010B SPK value	Unite: mg/L (E200.7/SW3 SPK Ref Val 0.003 0.007	%REC 90.1 95.0	Prep Da Analysis Da LowLimit 75 75	Pe: 9/19/20 ie: 9/20/20 HighLimit 125 125	0.909 0.954	SeqNo: <b>248</b> %RPD 0.552 0.314	30 30	Qual

RPD outside accepted recovery limits

Analyte detected below quantitation limits

**Environmental Restoration Services** 

Work Order:

0809124

Project:

0315

#### ANALYTICAL QC SUMMARY REPORT

BatchID:

R17407

Sample ID WDSG080918A-MB	SampType: MBLK	TestCo	de: TPHDSG_W	Units: mg/L		Prep Date:			RunNo: 174	<b>\$</b> 07	
Client ID: ZZZZZ	Batch ID: R17407	Testh	No: SW8015B			Analysis Date	9/19/2008		SeqNo: 24	9178	
Analyte	Result	PQL	SPK value 5	SPK Ref Val	%REC	LowLimit F	HighLimit R	PD Ref Val	%RPD	RECLimit	Quai
TPH (Diesel-SG)	ND	0.100							<u> </u>		
Surr: Pentacosane	0.08500	0	0.1	0	85,0	64.2	123	_			
Sample ID WDSG080918A-LCS	SampType: <b>LCS</b>	TestCo	de: TPHDSG_W	Units: mg/L		Prep Date	: 9/18/2008		RunNo: 17	407	
Client ID: ZZZZZ	Batch ID: R17407	Test	No: <b>\$WB015B</b>			Analysis Date	9/19/2008		SeqNo: 24	9179	
Analyte	Result	PQL	SPK value S	SPK Ref Val	%REC	LowLimit I	HighLimit R	PD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel-SG)	0.6740	0.100	1	0	67.4	34.5	95.6				
Surr: Pentacosane	0.08300	0	0.1	0	83.0	64.2	123		·	****	
Sample ID WDSG080918A-LCS	SampType: LCSD	TestCo	de: TPHDSG_W	Units: mg/L		Prep Date	9/18/2008	;	RunNo: <b>17</b> 4	407	
Client ID: ZZZZZ	Batch ID: R17407	Test	No: SW8015B			Analysis Date	9/19/2008	1	SeqNo: 249	9180	
Analyte	Result	PQL	SPK value S	SPK Ref Val	%REC	LowLimit	-lighLimit R	PD Ref Val	%RPD	RPDLimit	Qua
TPH (Diesel-SG)	0.6240	0.100	1	0	62.4	34.5	95.6	0.674	7.70	30	
Surr: Pentacosane	0.08600	0	0.1	0	86.0	64.2	123	0	0	0	

Environmental Restoration Services

0809124

Work Order:

ANALYTICAL QC SUMMARY REPORT

Project: 0315							В	atchID: I	R17429		
Sample ID MB_R17429	SampType: MBLK	TestCod	de: <b>8260B_W</b>	Units: µg/L		Prep Date	e: 9/25/20	08	RunNo: 174	29	
Client ID: ZZZZZ	Batch ID: R17429	Test!	lo: SW8260B			Analysis Date	e: 9/25/20	08	SeqNo: 249	486	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.500				·			<u> </u>		
Diisopropyl ether (DIPE)	ND	0.500									
Ethyl tert-butyl ether (ETBE)	ND	0.500									
Ethylbenzene	ND	0.500									
Methyl tert-butyl ether (MTBE)	ND	0.500									
t-Butyl alcohol (t-Butanol)	ND	5.00									
terl-Amyl methyl ether (TAME)	GM	0.500									
Toluene	ND	0.500									
Xylenes, Total	ND	1.50									
Sur: Dibromofluoromethane	10.94	0	11.36	0	96.3	61.2	131				
Surr: 4-Bromofluorobenzene	10.55	0	11.36	0	92.9	64.1	120				
Surr: Toluene-d8	11.44	0	11.36	0	101	75.1	127				
Sample ID LCS_R17429	SampType: LCS	TestCo	de: <b>82608_W</b>	Units: μg/L		Prep Date	e: <b>9/25/20</b>	08	RunNo: <b>17</b> 4	129	
Client ID: ZZZZZ	Batch ID: R17429	Testl	lo: <b>SW8260</b> B			Analysis Date	e: <b>9/25/20</b>	08	SegNo: 249	487	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	14.87	0.500	17.04	0	87.3	66.9	140	•			
Toluene	16.73	0.500	17.04	0	98.2	76.6	123				
Surr: Dibromofluoromethane	9.130	0	11.36	0	80.4	61.2	131				
Surr: 4-Bromofluorobenzene	12.71	0	11.36	0	112	64.1	120				
Sum: Toluene-d8	11.16	0	11.36	0	98.2	75.1	127				
Toluene	Prep Date	e: <b>9/25/20</b>	08	RunNo: 174	129						
Client ID: ZZZZZ	Batch ID: R17429	Testi	lo: SW8260B			Analysis Date	e: <b>9/25/20</b>	08	SeqNo: 249	9488	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	15.49	0.500	17.04		90.9	66.9	140	14.87	4.08	20	
						76.6	123	16.73	14.5	20	
Sum: Dibremofluoremethane	12,91	0	11.36	Ō	114	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	11.50	0	11.36	0	101	64.1	120	٥	0	0	
	quantitation range at the Reporting Limit			g times for preparation		is exceeded		Analyte detected l Spike Recovery o	-	ecovery limits	age 4 of 5

**Environmental Restoration Services** 

Work Order:

0809124

Project:

0315

ANALYTICAL QC SUMMARY REPORT

BatchID: R17429

Sample ID LCSD_R17429	SampType: LCSD	TestCode: 8260B_W TestNo: SW8260B	Units: µg/L	•	Prep Da	te: 9/25/20	08	RunNo: 174	129		
Client ID: 22222	Batch ID: R17429	TestNo	: SW8260B			Analysis Da	te: 9/25/200	08	SeqNo: <b>24</b> 9	488	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Taluene-d8	12 99	n	11.36	n	114	75.1	127	n.	n	n	-

# Torrent Laboratory, Inc.

### WORK ORDER Summary

18-Sep-08

Work Order 0809124

Client ID:

DYSERT (ENV RESTORATION S

Project:

0315

QC Level:

5 day TAT! Received 4 waters. Comments:

Sample ID	Client Sample ID	Collection Date	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
0809124-001A	MW-1	9/17/2008 9:30:00 AM	9/17/2008	9/23/2008	Water	8260B_W_PETRO			✓		5R
				9/23/2008		TPHDSG_W				[	SR
0809124-002A	MW-2	9/16/2008 3:21:00 PM		9/23/2008		8260B_W_PETRO		]	<b>V</b>		SR.
				9/23/2008		TPHDSG_W		[]		<u></u>	SR
0809124-003A	MW-3	9/16/2008 1:50:00 PM		9/23/2008		8260B_W_PETRO			<b>Y</b>		SR
				9/23/2008		TPHD\$G_W		!			SR
0809124-004A	Tank Pit	9/16/2008 12:41:00 PM		9/23/2008		200.7PR/3010A_	<u> </u>			[]	SR
				9/23/2008		6010B_W		[	<b>✓</b>		SR
				9/23/2008		8260B_W_PETRO	$\overline{\Box}$		¥.		SR
				9/23/2008		TPHDSG_W					SR

			HAIN OF C								<u> </u>	80				iter-	41	_
	Ben Halsted			-	phon	<b>e</b>									ı (if c			_
<u></u>	Environmen	tal Restoration	n Services	Ema							·····				ccon			-
Mailing Address	<u> </u>		<u> </u>	Mob			_							<u> </u>	Envir		ntal, l	r
City, State & Zip			-1	P.O.	No.	0	315		··· <del>-</del>		<del></del>		F	P.O. B	ox 560	8	••••	
Lab I.D.	_			Sam	pler/s	R	ichard '	Vasqı	uez/		<u> </u>		s	an Ma	iteo, C	A 94	102	
City, State & Zip  Lab I.D.  Project Name  Sample Matrix = Groundwater  Turn Around Time = 5 DAY  Sample ID:  MW-1  MW-2  MW-3  Tank Pit  Relinquished by Sample Temperature	Groundwater Sampling				Project Location		5651 \ an Lor			rive		ر	S	Samp	ling (	Code	=	
	<del></del>		··········	8015	anup fes +	5 Metals	-			1				-				
1				of TPH-Diesel by 8015	Wishica gel cleanup Fuel Oxygenates + BTEX by 8260	Luft 5 M						]	] 					
Sample ID:	Date:	Time:	No. of Container	TPH-D	Fuel C	Total												
MVV-1	9-17-08	0930	5	X	X												<u> </u>	
MW-2	9-16-08	1521	5	Х	X	1												
MW-3	9-16-08	1350	5	Х	X													
Tank Pit	9-16-08	1241	6	X	X	X								,				
										_								~
		Received by FR	<u>0 /                                   </u>				45	Da	9-16-	-08		tional	Maili	ng ins	tructi	ons:		4
MW-I Relinquished by	05	Received by	More .			Time /	570	Da	<u>9-17-</u> 9-17-	<u>-৫৪</u> ৩৪	cc: ı	narkd	ysert@	@aol.c	mo			
Relinquished by V Moor		Received by	<u>alii</u>				<u> </u>	72	<u>7-/7</u>		<u></u>						-,,	_
Lab Notes:		in lah = 4	^			Sami	oling N	otes:										
Relinquisted by  Relinquisted by  Relinquisted by  Relinquisted by  Relinquisted by  Relinquisted by			_	··· ,				··· <u>·</u>	<del></del>		<del></del>				W		age '	_

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OP 09 18)

# **WELL SURVEY**



#### CSS ENVIRONMENTAL SERVICES, INC.

Managing Cost, Scope and Schedule 100 Galli Drive, Suite 1 Novato, CA 94949 Telephone: (415) 883-6203 Facsimile: (415) 883-6204

#### Site Positions

CSS Project 6570 - Environmental Restoration Services 15651 Worthley Dr. San Lorenzo

Horizontal Coordinate System:

North American 1983-CONUS

North American Vertical Datum 1988-Ortho, St. (GEOIDO3)

Survey Date: 10/01/08

6570 Env. Restoration Serv. San Lorenzo.spr

Height System: Project file:

Desired Horizontal Accuracy:

 $0.100 \, \mathrm{FU} + 1 \, \mathrm{ppm}$ 

Desired Vertical Accuracy:

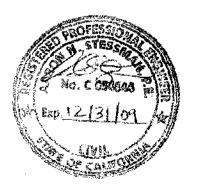
Linear Units of Measure:

0.100Ft + 2ppm

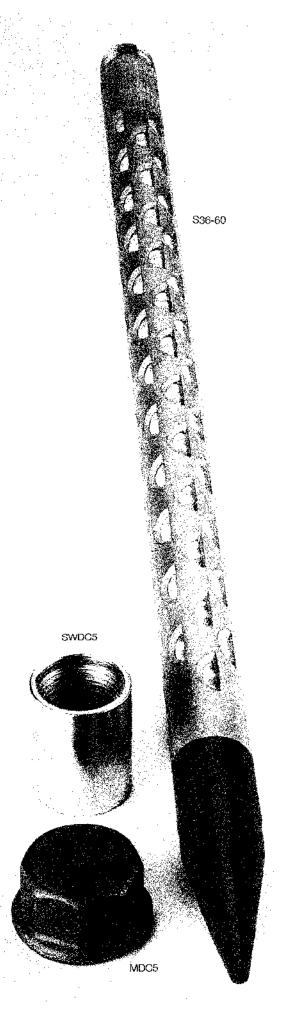
Confidence Level:

95% Err. Int. Feet

	Site ID	Site Descriptor	 · · · · · · · · · · · · · · · · · · ·	Position	95% Error	Fix Status	Position Status
1	3814	MONUMENT AA3814	37° 44′ 22° 12′		0.000 0.000 9.000	Fixed Fixed Fixed	Processed
2	MW-1	TEM-B ON N RIM N RIM WELL LOCATION N TOC	 37° 40′ 22° 09′	12.32799" N 12.02469" W 12.24 12.07	0.006 0.006		Processed
3	MW-3	NR WELL LOC N RIM WELL LOCATION N TOC	37° 40' 32° 09'	11.96369" N 11.78091" W 12.30 12.05	0.006 0.006		Processed
4	3667	MONUMENT HT3667		13.09995" N 40.30971" W 55.774	0.000 0.000 0.000	Fixed Fixed Fixed	Processed
5	MW-2	TBM-A ON N RIM N RIM WELL LOCATION N TOC	37° 40′ 22° 09′	11.96359" N 12.25711" W 12.27 11.70	0.019 0.026 0.045		Processed



# **WELL POINT CUT SHEET**



# Campoell Well Points

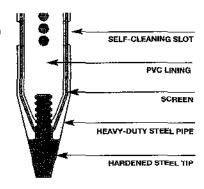


**WELL POINT** 

				screen		
part	size	length	gauze	material	pcs/ctn	
524-60	1-1/4	24	60	stainless steel	Bulk	
\$30-60	1-1/4	30	60	stainless steel	Bulk	
S36-60	1-1/4	36	60	stainless steel	Bulk	
S48-60	1-1/4	48	60	stainless steel	Bulk	
S60-60	1-1/4	60	60	stainless steel	Bulk	
S24-80	1-1/4	24	80	stainless steel	Bulk	
S30-80	1-1/4	30	80	stainless steel	Bulk	
S36-80	1-1/4	3 <del>6</del>	80	stainless steel	Bulk	
\$48-80	1-1/4	48	80	stainless steel	Bulk	
S24-100	1-1/4	24	100	stainless steel	Bulk	
S30-100	1-1/4	30	100	stainless steel	Bulk	
S36-100	1-1/4	36	100	stainless steel	Bulk	
S48-100	1-1/4	48	100	stainless steel	Bulk	
S236-60	2	36	60	stainless steel	Bulk	
\$248-60	2	48	60	stainless steel	Bulk	
S260-60	2	60	60	stainless steel	Bulk	
S236-80	2	36	80	stainless steel	Bulk	
S248-80	2	48	80	stainless steel	Bulk	
S236-100	2	36	100	staintess steel	Bulk	
S248-100	2	48	100	stainless steel	Bulk	
\$260-100	2	60	100	stainless steel	Bulk	

#### features

- Flush point for less friction resistance and easier driving. Easily passes through well casing and drive shoe.
- Self-flushing, chamfered, half-moon stots eliminate clay build-up.
- Internal screen for added protection against damage when driving.
- Engineered for use in most types of soil.
- Corrosion-resistant electro-galvanized steel pipe body.
- · No welded seams on screen.
- NSF-approved PVC pipe lining.
- . Can be used as a drive point, suction strainer, or jet pump installation (shallow or deep well).



part	sixe	pcs/ci <del>n</del>	SHALLOW WELL
SWDC5	1-1/4	40	DRIVE COUPLING
SWDC8	2	20	(imported)

Heavy galvanized steel design to provide extra strength. Taper-tapped 3/4" per foot on diameter, reamed, and drifted. Individually boxed



part	size	pcs/ctn	DRIVE CA
MDC5	1-1/4	Bulk	eller Fair
MDC8	2	Bulk	XXII.

Malleable iron for extra strength and durability. Vented in top.

