ALAMEDA BELT LINE RAILWAY CO
2201 West Washington Street # 12
Stockton, Ca 95203
209-466-6927

March 12, 2008

Mr. Jerry Wickham
Hazardous Materials Specialist
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Revised Limited Site Investigation Work Plan
Alameda Belt Line, 1925 Sherman Street, Alameda, CA 94501
SLIC Case RO0002487 and Geotracker Global ID T06019761967

Dear Mr. Wickham:

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

If you have any questions or need additional information, please contact me at (209) 466-6927.

Sincerely,

Dave Buccolo

General Manager
Alameda Belt Line Railway Company
Attachment

1590 Solano Way
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March 12, 2008 TRC Project No. 151792

Mr. Jerry Wickham
Hazardous Materials Specialist
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502-6577

RE: Revised Limited Site Investigation Work Plan
Alameda Belt Line, 1925 Sherman Street, Alameda, CA 94501
SLIC Case RO0002487 and GeoTracker Global ID T06019761967

Dear Mr. Wickham:

On behalf of Alameda Belt Line (ABL), TRC submits this *Revised Limited Site Investigation Work Plan* in response to comments made by the Alameda County Environmental Health (ACEH) in a letter on May 1, 2007 concerning the Chemical Spill Clean Up Report submitted by CLS Environmental Services, Inc. (CLS) on April 7, 2007, a subsequent letter on September 4, 2007, and Notice of Violation issued by the ACEH on October 30, 2007. The site is a former rail yard and is currently an open lot with one building (the Yard House) present near the eastern boundary located at 1925 Sherman Street in Alameda, California (Figures 1 and 2).

The ACEH has requested further investigation of the property to better characterize the extent of soil and groundwater impacts, presumably based on the results of the March 1999 Phase II Environmental Site Assessment (ESA) and June 1999 Remedial Investigation completed by URS Greiner Woodward-Clyde (URSGWC) and the April 7, 2007 Chemical Spill Cleanup Report submitted by CLS. These historical investigations and data are discussed below:

(1) During the February 1999 Phase II investigation, analysis of soil samples collected in the vicinity of the former above ground storage tank (AST) and maintenance building contained elevated concentrations of total petroleum hydrocarbons as diesel (TPH-d) (maximum concentration of 38 mg/kg in sample ABL-SB-10-01) and TPH as motor oil (TPH-mo) (maximum concentration of 280 mg/kg in sample ABL-SB-11-01) (Table 2-1, Appendix A). A groundwater grab sample collected from boring B-10 contained an elevated concentration of TPH-d (3.7 milligrams per liter (mg/l), Table 2-2, Appendix A) (URSGWC 1999a).

(2) During the June 1999 Remedial Investigation, additional soil samples were collected in the vicinity of SS-1 for analysis of lead, and additional groundwater samples were collected in the vicinity of the AST for analysis of TPH and in the

vicinity of B-6 for analysis of 1,2 dichloroethene (1,2-DCE). TPH-g and 1,2-DCE were not detected above the laboratory reporting limit in any of the groundwater samples. TPH-d was detected in one sample (GWTPH-5) at 0.08 mg/l. Lead was detected at a maximum of 110 mg/kg at SSPb-11 located to the east of the SS-1 sample location. This investigation determined that hydrocarbons are not a contaminant of concern at the site (URSGWC 1999b).

Following their review of the Remedial Investigation report, the ACEH issued a letter dated July 6, 1999 indicating that no further characterization is required for ballast rock and groundwater onsite. In addition, the ACEH indicated the laboratory results of samples collected from different areas of the site did not indicate the presence of significant contamination.

(3) During the October 2006 Chemical Spill Cleanup, approximately 90 tons of soil was excavated in the northeastern portion of the property. A total of five confirmation soil samples were collected from the excavation from the side walls and floor.

Lead was detected above 150 milligrams per kilogram (mg/kg) in two of the soil samples (169 mg/kg in the north wall sample PS-3 and 190 mg/kg in the east wall sample PS-4, Table 1, Appendix A) (CLS 2007).

Following the January 23, 3008 meeting with the ACEH, the following actions were agreed to be undertaken in order to address initial ACEH concerns regarding the previously proposed scope of work:

1. Provide the ACEH a complete copy of the report entitled “Phase I Environmental Assessment, 22-Acre Former Alameda Belt Line Rail Yard, Alameda, California, dated February 22, 1999, if available, or obtain aerial photographs and Sanborn maps of the site referenced in the Phase I Report.

2. Review available ACEH files on the site.

3. Submit a figure with revised locations for soil sampling in the tenant area and former spill area to locate the source(s) and define the extent of elevated lead in soil.

Following completion of the above listed activities, the ACEH has requested a site meeting to review the site features and proposed sampling locations.

Based on the substantial quantity of additional information obtained during the ACEH file review, specifically information included in the June 1999 Remedial Investigation Report and the ACEH response letter dated July 6, 1999, TRC has revised the original scope of work to focus the proposed investigation on only two remaining areas of potential concern.

The data presented in the June 1999 Remedial Investigation Report represent a significant effort in site characterization and the results clearly show that lead in site soils over a significant area of the property are well below the most conservative residential screening level. The area targeted for additional investigation during the June 1999 Remedial Investigation was based on one elevated lead result from sample SS-1 in the March 1999 Phase II Environmental Assessment and the scope of work to conduct additional investigation of this lead result completed during the Remedial Investigation was reviewed and approved by the ACEH. Furthermore, the area of additional soil

investigation during the Remedial Investigation is inclusive of the October 2006 chemical spill and cleanup location. The presence of two soil samples with slightly elevated lead concentrations reported following the spill response and excavation clearly represent localized areas and those results, along with the one elevated lead results from SS-1, are not indicative of extensive lead impacts to site soils. The additional fourteen soil samples collected over an area of approximately 60,000 square feet represent a significant effort and their results clearly show that lead is not present to any significant extent in site soils.

However, based on discussions with ABL personnel, two areas were identified, outside the area of additional investigation completed during the June 1999 Remedial Investigation, where piles of discarded batteries had been observed. These two locations have already been investigated during the March 1999 Phase II Environmental Assessment by the advancement of borings B-3 and B-4 (Figure 2). Results from soil samples collected at these two locations did not indicate the presence of elevated lead. Nevertheless, TRC has proposed to further investigate these two areas of potential concern.

The following scope of work in this Revised Limited Site Investigation Work Plan is designed to further investigate two areas of potential concern regarding elevated lead concentrations in soil, specifically two locations where the illegal dumping of used batteries was historically observed by ABL personnel.

1.0 PROJECT OBJECTIVES AND SCOPE OF WORK

The objectives of this work plan are to:

> Investigate the potential presence of lead is surface soils at two remaining areas of concern onsite where debris piles were historically observed by ABL personnel to have contained illegally dumped batteries.

The scope of work for this assessment includes the following:

(1) Collection of soil samples from the two proposed areas of potential concern, in the vicinity of historical borings B-3 and B-4, for analysis at a state-certified laboratory. Historical borings B-3 and B-4 are located in the immediate vicinity of where debris piles were observed historically by ABL personnel to have contained illegally dumped batteries. The historically reported, but low concentrations of lead in soil samples from boring B-3 and B-4 (50 mg/kg and 88 mg/kg, respectively) indicate these two areas may be within the immediate area of the dumped batteries.

(2) Preparation of a final technical report documenting the soil sampling activities and locations and summarizing the laboratory analytical results.

2.0 SITE DESCRIPTION

The subject property is located at 1925 Sherman Street, in a commercial/industrial zoned area of Alameda, California (Figure 1 and 2). The site, currently owned by ABL, is a non-paved, somewhat rectangular 22-acre lot historically operated as a rail yard and maintenance facility by the ABL. The site formerly had a maintenance building that consisted of two concrete maintenance pits and one above ground fuel tank.

The site currently contains the concrete foundations from the maintenance building and the above ground fuel tanks located near the western property boundary, and one remaining building (Yard House), located near the eastern property boundary. The site is bounded to the north by a commercial office complex, to the east by Sherman Street, to the south by residential properties, and to the west by Constitution Way.

2.1 Regional Geologic Setting

The subject property is situated at an elevation of 10 above feet mean sea level (MSL). The office complex to the north of the site was raised by filling when it was developed causing the surface drainage of the site to be directly towards the west. The nearest body of water is the Encinal Basin, located about 800 feet northeast, and is a part of the Oakland Estuary.

2.2 Site Geologic Subsurface Conditions

The subject property is underlain by sandy clay varying from 1 to 6 feet below grade (fbg). Below this is silty sand and sand to the total depth explored of 18 fbg throughout the northern portion of the site. In the southern part of the site there is a clay layer below the silty sand layer beginning between 8 and 11 fbg and continuing to the total depth explored of 12 fbg (URSGWC, 1999). Depth to groundwater was observed between 1 fbg and 3.5 fbg in the temporary casings installed in each of the borings during the February 1999 investigation.

3.0 SITE BACKGROUND

February 23, 1976: The 20,000 gallon AST, pump house and oil unloading fixtures were sold to All Cal Marketing located at 520 Boden Way, Oakland, California. Other documents state that the AST had been empty for two years at the time of sale. All Cal Marketing is identified as a potato processor and presumably purchased the AST for its own use.

September 14, 1979: The railroad maintenance building was destroyed in an arson suspected fire.

January and February 1999: URSGWC completed a Phase I ESA of the site for Sun Country Partners, LLC.

February 16, 1999: URSGWC completed a Phase II Investigation of the site for Sun Country Partners, LLC. A total of 29 soil samples and 12 grab groundwater samples were collected from 12 soil borings and 5 shallow soil sample locations. Lead was reported in at an elevated concentration in one soil sample (SS-1) at a concentration of 380 mg/kg and TPH-d was reported at an elevated concentration in one grab groundwater sample (B-10) at a concentration of 3.7 mg/l (URSGWC 1999a).

May 19-21, 1999: URSGWC completed a Remedial Investigation of the site for Sun Country Partners, LLC. A total of 11 borings were completed to collect grab groundwater samples and 14 shallow soil samples were collected. Six of the groundwater samples were analyzed for 1,2-DCE and five of the groundwater samples were analyzed for TPH. The shallow soil samples were analyzed for lead. TPH-g and 1,2-DCE were not detected above the laboratory reporting limit in any of the groundwater samples. TPH-d was detected in one sample (GWTPH-5) at 0.08 mg/l. Lead was detected in all fourteen of the samples collected at a maximum of 110 mg/kg at SSPb-11 located to the east of the former B-1 sample location (see Figure 3 for this location) (URSGWC 1999b).

October 19, 2006: CLS responded to a spill near the northeastern portion of the site. Approximately 100 gallons of waste and hydraulic oil were spilled from two 55-gallon drums that were discarded onsite by an unknown source. CLS excavated approximately 90 tons of soil and collected confirmation soil samples as directed by ACEH. Lead was detected at slightly elevated concentrations in two of the five soil samples collected at a concentration of 169 mg/kg (PS-3) and 190 mg/kg (PS-4) (CLS 2007).

4.0 SITE ASSESSMENT ACTIVITIES

Based on a recent review of the project files at the ACEH, specifically the June 1999 Remedial Investigation Report and subsequent ACEH correspondence following submittal of that report, TRC has revised the scope of work to address only the areas of concern that remain onsite. Specifically, TRC will investigate the presence of lead in surface soils at two locations onsite where ABL personnel have historically observed debris piles containing illegally dumped batteries.

TRC is no longer proposing any soil or groundwater samples be collected from the areas adjacent to the former above ground tank or the maintenance pits as previously proposed in the November 30, 2007 Limited Site Investigation Work Plan (TRC, 2007). According to the July 6, 1999 response letter from the ACEH, no further characterization is required for ballast rock and groundwater onsite and the laboratory results of samples collected from different areas of the site did not indicate the presence of significant contamination.
In addition, TRC is no longer proposing any additional soil sampling be completed in the vicinity of SS-1 because, according to the ACEH, lead was sufficiently delineated around this location during the May 1999 Remedial Investigation. The locations of these additional soil samples surrounding sample SS-1 collected during the June 1999 Remedial Investigation are presented in Figure 3 and the table summarizing the data is included in Appendix A.

4.1 Pre-Field Activities

Prior to commencing soil sampling activities, a site and job specific health and safety plan that promotes personnel safety and preparedness during the planned activities will be developed prior to mobilization and a copy will be available onsite during the field activities. On the morning of the day that the field activities are to commence, a “tailgate” meeting will be conducted with all exclusion zone workers to discuss the health and safety issues and concerns related to the specific work.

4.2 Soil Sampling

A total of four (4) surface soil samples will be collected at two separate areas of potential concern to determine if elevated lead concentrations are present in site soils where debris piles were reported by ABL personnel to have historically contained illegally dumped batteries. The two proposed sample locations are in the immediate vicinity of historical borings B-3 and B-4, installed during the February 1999 Phase II Environmental Assessment. The samples will be collected at two locations near each former boring as shown on Figure 2. The proposed locations may be adjusted based on the location of buried utilities or on the apparent location of former debris piles that contained the used batteries.

Collected soil samples will be analyzed for lead by EPA Method 6010, on a standard turnaround time. All laboratory analyses will be performed by a state-certified laboratory. Chain of custody protocol will be followed for all samples selected for analysis, providing a continuous record of sample possession prior to analysis.

4.3 Waste Disposal

Any soil cuttings and decontamination water generated during site assessment activities will be temporarily stored onsite in Department of Transportation (DOT)-approved 55-gallon drums pending disposal to an approved disposal/recycling facility. Waste manifests will be prepared for proper transport and disposal of the waste.

4.4 Site Investigation Report

Upon completion of the site investigation activities, a final report will be prepared and submitted to the ACEH that will include a map of the sample locations, a summary and discussion of the laboratory analytical results, and a presentation of the findings and conclusions.

5.0 WORK SCHEDULE

Planned activities will be performed according to the following estimated completion schedule:

- Agency approval of work plan.
- Conduct soil investigation within six weeks of receipt of the agency approval.
- Submit technical report within six weeks of obtaining soil analytical results from the laboratory.

6.0 REFERENCES

CLS Environmental Services, Inc., *Report of Emergency Response and Remedial Action,* Oil Spill 1925 Sherman Way, Alameda, CA. April 7, 2007.

URS Greiner Woodward Clyde. *Phase II Environmental Assessment,* 22-Acre Former Alameda Belt Line Rail Yard, Alameda, California. March 9, 1999.

URS Greiner Woodward Clyde. *Remedial Investigation,* 22-Acre Former Alameda Belt Line Rail Yard, Alameda, California. June 28, 1999.

If you have any questions regarding this work plan, please call Keith Woodburne at (925) 688-2488.

Sincerely,

Rachelle Dunn
Senior Staff Geologist

Keith Woodburne, P.G.
Senior Project Manager

REGISTERED GEOLOGIST
KEITH L. WOODBURNE
No. 7607
exp 1/09
STATE OF CALIFORNIA

TRC

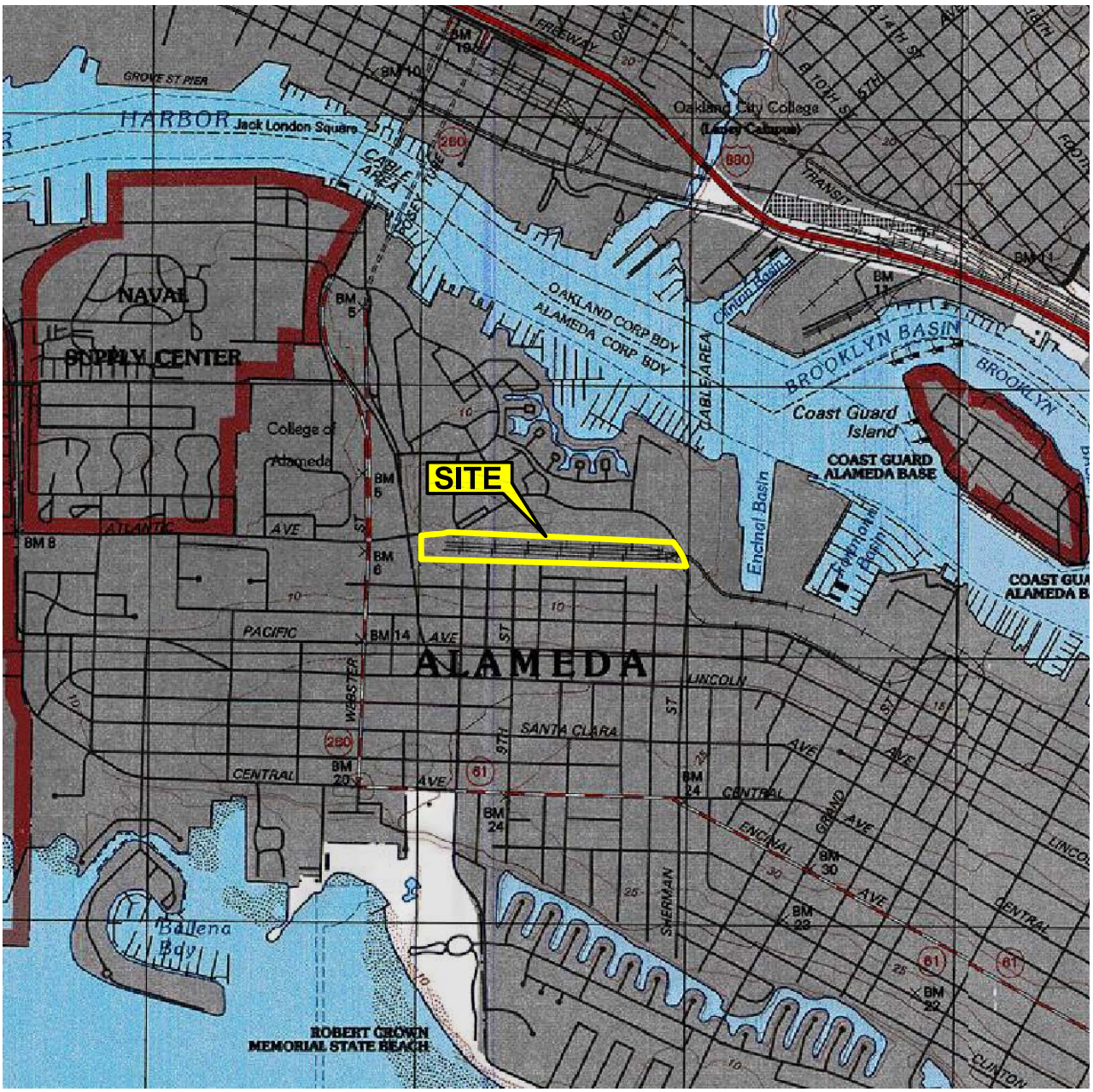
ATTACHMENTS:

Figure 1: Vicinity Map
Figure 2: Site Plan
Figure 3: Location of Shallow Soil Samples Completed in June 1999

Appendix A: Historical Tables
Appendix B: Health and Safety Plan

cc: Donna Drogos, Supervising Hazardous Materials Specialist, ACEH
Dave Buccolo, General Manager, Alameda Belt Line
Bill Bitting, ABL Legal Counsel
Matt Graham, BNSF Environmental Manager
Russell Light, BNSF Legal Counsel
Mike Grant, UPRR Environmental Manager
Bob Blysma, UPRR Legal Counsel
Christine Smith UPRR Legal Counsel
Peter Lee BNSF Legal Counsel
Alyce Sandbach, Consumer and Environmental Protection Division
Dale Lillard, City of Alameda
Teresa Highsmith, City Attorney
Cherie McCaulou, San Francisco Regional Water Quality Control Board

FIGURES



1 MILE 3/4 1/2 1/4 0 1 MILE

SCALE 1 : 24,000

N

SOURCE:

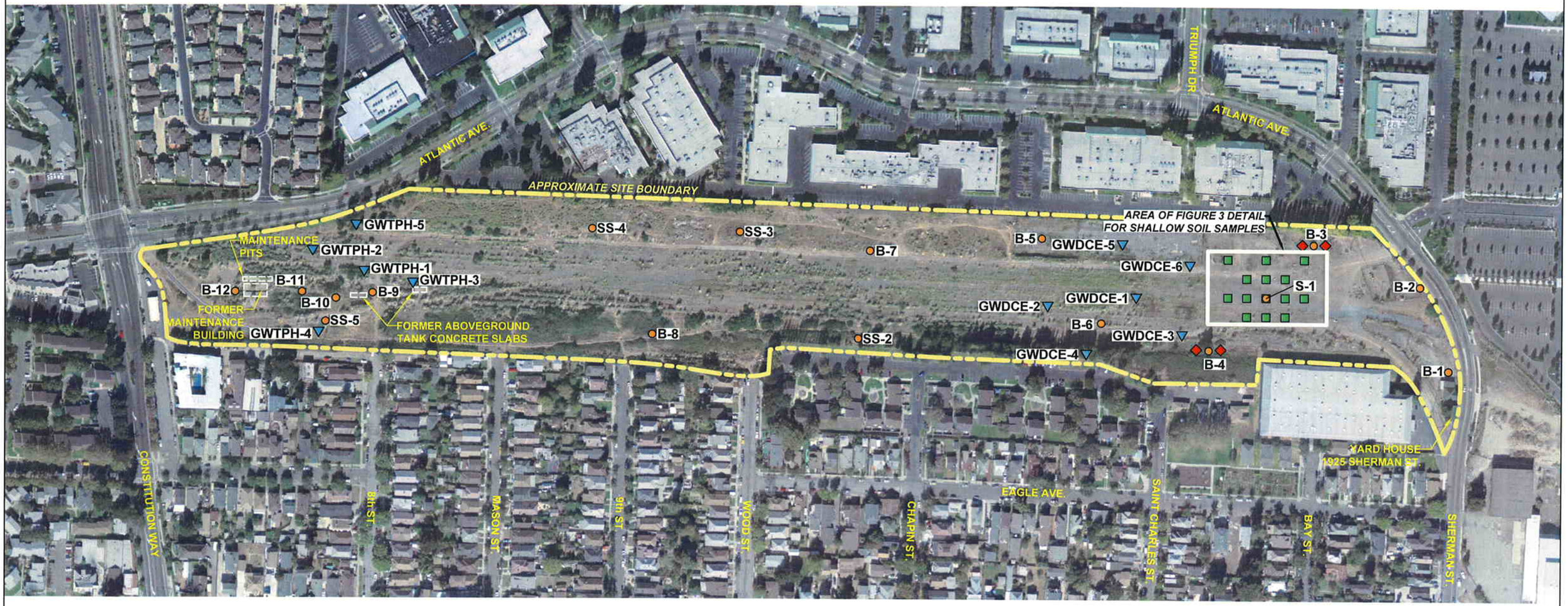
United States Geological Survey
7.5 Minute Topographic Maps:
Oakland East and Oakland West Quadrangles,
California

VICINITY MAP

Alameda Belt Line Site
1925 Sherman Street
Alameda, California

TRC

FIGURE 1



LEGEND

- Approximate soil sample location (URSGWC, March 1999)
- Approximate groundwater sample location (URSGWC, June 1999)
- Approximate surface soil sample location (URSGWC, June 1999)
- Proposed soil sampling location

N

APPROXIMATE SCALE (FEET)

0 250 500

AERIAL PHOTO SOURCE: Maptech, February 2004

SITE PLAN

Alameda Belt Line Site
1925 Sherman Street
Alameda, California

TRC

FIGURE 2

LEGEND

- Approximate soil sample location (URSGWC, March 1999))
- Approximate surface soil sample location (URSGWC, June 1999)

N

APPROXIMATE SCALE (FEET)

0 30 60

AERIAL PHOTO SOURCE: Maptech, February 2004

LOCATION OF SHALLOW SOIL SAMPLES COMPLETED IN JUNE 1999

Alameda Belt Line Site
1925 Sherman Street
Alameda, California

TRC

FIGURE 3

APPENDIX A

HISTORICAL TABLES

Tables from

PHASE II ENVIRONMENTAL SITE ASSESSMENT
22-Acre Former Alameda Belt Line Rail Yard
Alameda, California

by

URS Greiner Woodward Clyde
March 1999

TABLE 2-1. SUMMARY OF LABORATORY ANALYSIS RESULTS FOR SOIL SAMPLES [mg/kg]

Sample ID	ABL-DC01 (Soil Cuttings)	ABL-SS-1-0-1	ABL-SS-2-0-1	ABL-SS-3-0-1	ABL-SS-4-0-1	ABL-SS-5-0-1	ABL-SB-1-0-1	ABL-SB-1-2-3	ABL-SB-2-0-1	ABL-SB-2-2-3	ABL-SB-3-0-1	ABL-SB-3-2-3	ABL-SB-4-0-1	ABL-SB-4-2-3	ABL-SB-5-0-1	ABL-SB-5-2-3	ABL-SB-6-0-1	ABL-SB-6-2-3	ABL-SB-7-0-1	ABL-SB-7-2-3	ABL-SB-8-0-1	ABL-SB-8-2-3	ABL-SB-9-0-1	ABL-SB-9-2-3	ABL-SB-10-0-1	ABL-SB-10-2-3	ABL-SB-11-0-1	ABL-SB-11-2-3	ABL-SB-12-0-1	ABL-SB-12-2-3
Sampling Date	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99
Sampling Depth [ft]	--	0-1	0-1	0-1	0-1	0-1	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3	0-1	2-3
BTEX, MTBE, TPHg, and TPHd by EPA Method 8020A																														
Benzene	<0.005	--	--	--	--	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	--	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--
Toluene	<0.005	--	--	--	--	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--
Ethlybenzene	<0.005	--	--	--	--	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--
Total Xylenes	<0.005	--	--	--	--	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--	<0.005	--
TPH-Diesel	<1.0	3.5	<1.0	11	<1.0	<1.0	39.0 H	1.1 H	6.8 H	5.8 H	7.6 H	6.2 H	<1.0	6.4 H	16.0 H	10.0 H	7.0 H	6.5 H	<1.0	5.0 H	5.1 H	9.8 H	6.1 H	<1.0	38.0 H	--	36.0 H	5.0 H	36.0 H	4.6 H
TPH-Motor Oil	--	<50	<50	<50	<50	<50	350.0 H	<50	<50	<50	<50	<50	<50	<50	66.0 H	<50	<50	<50	<50	<50	<50	<50	<50	<50	72.0 H	<50	280.0 H	<50	180.0 H	<50
TPH-Gasoline	<1.0	--	--	--	--	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--	<1.0	--
VOCs by EPA Method 8260A																														
None Detected	<5;<50	--	--	--	--	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--	<5;<50	--
SVOCs by EPA Method 8270A																														
PNAs	--	--	--	--	--	--	<0.05-<2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs by EPA Method 8080A (detected only)																														
AROCLOR 1260	<0.1	0.11	<0.1	<0.1	<0.1	<0.1	<0.66 S	--	<0.1	--	<0.1	--	<0.1	--	<0.66 S	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--
CAM 17 Metals by EPA Method 3050A/ 6010A/ 7471A (detected only)																														
Antimony	<2.0	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic	1.3	12	6.3	3.4	2.5	3.1	3.1	1.7	<1.0	<1.0	2.7	1.2	3.8	1.8	1.6	2	2.2	<1.0	2.8	1.2	22	3.5	3.4	1.6	4	<1.0	4	2.2	2.2	2.1
Barium	22	120	60	160	46	62	57	15	11	11	68	24	40	51	62	32	47	9.1	40	48	28	34	190	11	240	9.6	76	25	39	14
Cadmium	<0.5	3.9	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
Chromium	17	35	21	18	28	29	29	22	17	16	26	22	28	34	28	30	27	21	21	20	27	30	21	18	47	22	38	29	27	25
Cobalt	2.5	6.2	4.6	15	5.2	7.1	4.5	2.8	2.5	1.8	6.6	4.4	4.6	6.1	9.2	3.4	4.2	2.2	7.5	5	17	11	9.9	2.4	17	2	9.1	3	4.4	2.4
Copper	5.5	160	16	15	15	17	12	3.7	3	3.2	52	21	20	9.6	45	14	14	2.6	62	9.3	25	18	14	5	19	2.7	81	10	9.5	4.2
Lead	2.7	380 *	41	64	11	36	65	2.4	1.6	6.6	50	5.5	88	4.3	50 *	30	29	1.2	24	4.3	7.9	6.8	9.7	6.4	9.6	1.9	93 *	12	5.5	3.2
Mercury	<0.05	0.26	0.24	0.18	0.21	0.071	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	0.14	<0.05	0.097	<0.05	<0.05	<0.05	0.2	<0.05	0.057	<0.05	<0.05	<0.05	0.052	<0.05	0.058	0.067	<0.05	<0.05
Molybdenum	<1	1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	12	47	24	18	32	45	30	24	19	15	32	20	28	41	33	20	29	17	22	32	24	21	42	19	99	17	59	26	24	17
Selenium	<2	3.5	<2	<2	<2	2.2	<2	<2	<2	<2	2	<2	2	<2	2.7	2.5	<2	<2	<2	<2	2	2	<2	2.1	2.2	<2	2.6	<2	<2	<2
Vanadium	13	22	18	85	23	20	22	14	10	9.6	24	19	20	21	33	22	19	13	23	13	26	24	16	12	20	14	28	23	20	18
Zinc	11	460	52	72	29	46	210	12	10	12	120	16	70	19	51	26	41	10	30	18	43	34	25	9.7	54	10	230	25	20	13

Notes:

Results above detection limit are **bolded.**

Soil samples are a composite of 1 foot of soil.

H = Hydrocarbon does not match the pattern standard or have a characteristic hydrocarbon pattern.

* Samples analyzed for STLC Lead yielded the following concentrations: ABL-SB-5-0-1 = < 1 mg/L, ABL-SB-11-0-1 = 2.2 mg/L, ABL-SS-1-0-1 = 33 mg/L. Samples analyzed for DI Water STLC Lead did not detect concentrations of lead above the reporting limit.

TABLE 2-2. SUMMARY OF LABORATORY ANALYSIS RESULTS FOR WATER SAMPLES [mg/L]

Sample ID	TB01	DUP-GW-1	ABL-GW-1	ABL-GW-2	ABL-GW-3	ABL-GW-4	ABL-GW-5	ABL-GW-6	ABL-GW-7	ABL-GW-8	ABL-GW-9	ABL-GW-10	ABL-GW-11	ABL-GW-12
Sampling Date	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99	2/15/99
Depth to Water [ft]	--	2.7	2.7	2.7	2.1	1.5	3.4	3.6	3.1	9.0	1.3	1.3	3.0	3.2
BTEX, TPHg, TPHd, MTBE by EPA Method 8020A														
Benzene	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ethlybenzene	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Total Xylenes	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.0024**	<0.0005	<0.0005	<0.0005	<0.0005
TPH-Gasoline	--	**0.052 H**	**0.079 H**	<0.050	**0.160 H**	<0.050	<0.050	**0.110 H**	<0.050	**0.055 H**	**0.092 H**	**0.430 H**	<0.050	<0.050
TPH-Diesel	--	<0.050	<0.050	<0.050	<0.050	<0.050	**0.100 H**	**0.099 H**	<0.050	<0.050	-- *	**3.700 H S**	<0.050	<0.050
MTBE	--	<0.005	**0.062**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.017**	<0.005	<0.005	<0.005
VOCs by EPA Method 8260A (detected only)														
Carbon Disulfide	<0.001	**0.0012**	<0.001	<0.001	<0.001	<0.001	**0.0024**	<0.001	<0.001	<0.001	-- *	<0.001	<0.001	<0.001
1,2-Dichloroethene (cis)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.11**	<0.0005	<0.0005	-- *	<0.0005	<0.0005	<0.0005
1,2-Dichloroethene (trans)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.0042**	<0.0005	<0.0005	-- *	<0.0005	<0.0005	<0.0005
Trichloroethene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.0029**	<0.0005	<0.0005	-- *	<0.0005	<0.0005	<0.0005
Total Xylenes	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0019**	-- *	<0.001	<0.001	<0.001
CAM 17 Metals by EPA Method 3050A/ 6010A/ 7471A (detected only)														
Antimony	--	<0.005	<0.005	**0.0057**	<0.005	**0.0098**	<0.005	**0.0059**	**0.0057**	**0.0052**	-- *	**0.0084**	**0.0069**	<0.005
Barium	--	**0.026**	**0.081**	**0.022**	**0.055**	**0.067**	**0.022**	**0.1**	**0.019**	**0.026**	-- *	**0.019**	**0.058**	**0.024**
Cobalt	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.06**	-- *	<0.005	<0.005	**0.0064**
Copper	--	<0.005	**0.023**	**0.033**	**0.043**	**0.032**	**0.0023**	**0.033**	**0.027**	**0.063**	-- *	**0.045**	**0.019**	**0.043**
Molybdenum	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0065**	<0.005	-- *	<0.005	**0.0068**	<0.005
Nickel	--	**0.0083**	**0.053**	**0.0075**	**0.012**	**0.0069**	<0.005	**0.015**	**0.0056**	**0.27**	-- *	**0.018**	**0.0082**	**0.012**
Selenium	--	**0.043**	<0.005	<0.005	**0.0073**	<0.005	**0.051**	**0.0077**	<0.005	**0.0059**	-- *	<0.005	**0.013**	**0.0059**
Vanadium	--	**0.016**	<0.005	<0.005	<0.005	<0.005	**0.019**	<0.005	<0.005	<0.005	-- *	<0.005	<0.005	<0.005
Zinc	--	<0.01	**0.011**	**0.036**	**0.013**	**0.018**	<0.01	**0.014**	**0.01**	**0.24**	-- *	**0.022**	**0.027**	**0.011**

Notes:

Results above detection limit are **bolded.**

* = Not enough water collected due to silting of borehole.

H = Hydrocarbon does not match the pattern standard or have a characteristic hydrocarbon pattern.

S = Analysis by EPA Method 8015M silica gel cleanup detected a diesel concentration of 2.4 mg/L.

Tables from
Remedial Investigation
22-Acre Former Alameda Belt Line Rail Yard
Alameda, California
by
URS Greiner Woodward Clyde
June 1999

TABLE 2-1

SUMMARY OF LABORATORY ANALYSIS RESULTS FOR LEAD IN BALLAST ROCK [mg/kg]

Sample ID	ABL-SSPb-1	ABL-SSPb-2	ABL-SSPb-3	ABL-SSPb-4	ABL-SSPb-5	ABL-SSPb-6	ABL-SSPb-7	ABL-SSPb-8	ABL-SSPb-9	ABL-SSPb-10	ABL-SSPb-11	ABL-SSPb-13	ABL-SSPb-14	ABL-SSPb-16
Lead	7.4	22	16	83	17	50	39	10	36	17	110	56	66	7.8

NOTE:
Ballast rock samples are a composite of 1 foot of soil.

TABLE 2-3

SUMMARY OF LABORATORY ANALYSIS RESULTS FOR WATER SAMPLES ANALYZED FOR VOCs [mg/L]

Sample ID	ABL-GWDCE-1	ABL-GWDCE-2	ABL-GWDCE-3	DUPLICATE ABL-GWDCE-3D	ABL-GWDCE-4	ABL-GWDCE-5	ABL-GWDCE-6
Sampling Depth	9.5	9.5	9.5	9.5	9.5	9.5	9.5
VOCs by EPA Method 8260A (1,2-DCE and detected only)							
Acetone	< 0.05	< 0.05	**0.069**	**0.064**	**0.055**	< 0.0005	< 0.05
1,2-Dichloroethene (cis)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethene (trans)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.00058**	< 0.0005
Total Xylenes	**0.0013**	< 0.001	< 0.001	< 0.001	< 0.001	**0.0028**	< 0.001

Notes:
Results above detection limit are **bolded.**

Table from

REPORT OF EMERGENCY RESPONSE AND REMEDIAL ACTION
Oil Spill, 1925 Sherman Way, Alameda, CA

by

CLS Environmental Services, Inc.
April 7, 2007

Soil and Water Sampling

Upon approval from and as directed by the ACDEH, confirmation soil samples were collected from the affected areas post remedial efforts. Sample locations are presented on Figure 3, Appendix A. All samples collected were submitted under chain of custody to Excelchem Analytical Laboratories, a state certified lab located in Roseville, CA. Five soil samples (PS-1 through 5) were retrieved from the remedial area using a manually operated slide hammer and collected in 2-inch x 6-inch brass sleeves. The samples were then labeled with an identification number and client's name, placed a pre-cooled container, and prepared for transport. Based on the determination that the spilled material was in fact comprised of a combination of waste and hydraulic oil, CAL EPA and ACDEH guidelines for sampling at waste oil release sites were used. In accordance with the ACDEH guidelines, each sample submitted was subjected to chemical testing of Total Petroleum Hydrocarbons as hydraulic oil and diesel (TPH-ho/d) using EPA method 8015M, Total Petroleum Hydrocarbons as gasoline (TPH-G), Benzene, Toluene, Ethyl-benzene, and Xylene (BTEX), Fuel Oxygenates, and Volatile Organic Compounds (VOC) using EPA method 8260, Semi-Volatile Organic Compounds Using EPA method 8270, and CAM 17 Metals using EPA method 6010B and 7471A.

Results of Soil Sampling and Testing

As presented in Table 1 below and substantiated by the Certified Laboratory Reports presented as Appendix B, detectable concentrations of petroleum hydrocarbon and/or heavy metals were found in each of the five confirmation samples tested.

Sample ID	Date	Depth (fbg)	Location	TPH-ho	Lead
PS-1	1.19.07	4′	West wall	702	12.1
PS-2	1.19.07	2.5′	South wall	118	13.4
PS-3	1.19.07	3′	North wall	209	169
PS-4	1.19.07	1.5′	East wall	198	190
PS-5	1.19.07	5′	Floor	179	11.0
Reporting Limits				50.0	1.0

Notes:

- Concentrations are presented as mg/kg or parts per million.
- Due to the copious amount of constituents tested, only the analytes that presented relevant and/or significant concentrations are presented in the table. The Certified Laboratory Reports presented as Appendix B provide a full account of the chemicals tested.
- FBG = Feet below grade

Soil Off-Haul and Disposal

The contaminated soil removed from the spill area was transported under hazardous waste manifests by MP Environmental and disposed of at the Chemical Waste Management disposal facility located in Kettleman City, CA. Copies of the manifests are presented as Appendix C.

Restoration

The excavated area was backfilled with soils stockpiled in other areas of the site and compacted.

APPENDIX B

HEALTH AND SAFETY PLAN

SITE SPECIFIC HEALTH & SAFETY PLAN

Alameda Belt Line
22-Acre Former Alameda Belt Line Yard
1925 Sherman Street
Alameda, California

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SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)

Alameda Belt Line
22-Acre Former Alameda Belt Line Yard
1925 Sherman Street
Alameda, California

1.0 INTRODUCTION

The purpose of this Health and Safety Plan (HASP) is to establish responsibilities, procedures, and contingencies for the protection of TRC employees, contractors, visitors, and the public while performing activities at 22-Acre Former Alameda Belt Line Yard (the Site). This site-specific HASP is to be implemented in conjunction with TRC's Health and Safety Programs, including the Injury and Illness Prevention Program (IIPP) and Hazard Communication Program.

The use of proper health and safety procedures in accordance with applicable OSHA regulations shall be required during site work. The procedures presented in this HASP are intended to serve as guidelines. They are not a substitute for sound judgment by site personnel.

1.1 Key Companies Involved In Project

CUSTOMER OR CLIENT:	ABL
DESIGN ENGINEER:	TRC
CONTRACTOR:	TRC
SUBCONTRACTORS:	N/A

1.2 Scope of Work

The proposed work will be performed by TRC and the above listed subcontractor's and will include, but may not be limited to, the following activities:

- *Collection of surface soil samples*

2.0 SITE INFORMATION

This HASP considers the physical, chemical, and biological hazards that may be encountered during work activities at the site. Operations associated with this HASP will be conducted in accordance with the scope of work and approved design drawings/specifications.

Summary information for this project is provided in the following table:

Table 1: Site Information

Anticipated Work Period:	TBD
Site Description (see Attachment A for site map):	Dirt lot
Approximate depth to groundwater:	1-3 feet below grade

Contaminants of Concern (see Attachment B):	Lead in site soils

3.0 ROLES & RESPONSIBILITIES

Contact information and names of key project personnel are listed below. A description of their responsibilities follows.

Table 2: Key Project Personnel and Contact Information

Role	Name	Contact Information
TRC Personnel		
TRC Project Manager/Supervisor	Keith Woodburne	Office (925) 688-2488 Cell (925) 260-1373
TRC Site Safety Officer (SSO)	Rachelle Dunn	Office (925) 688-2464 Cell (925) 260-6722
TRC Assistant Site Safety Officer (Assistant SSO)	Monika Krupa	Office (925) 688-2482 Cell (925) 250-3638
Subcontractor Personnel		☐ NA
Subcontractor Company Name: TBD		
Site Safety Officer (SSO)	TBD	
Assistant Site Safety Officer (SSO)	TBD	
Subcontractor Company Name:		
Site Safety Officer (SSO)	TBD	
Assistant Site Safety Officer (SSO)	TBD	

TRC Site Safety Officer or Assistant Safety Officer must report all site incidents immediately to the TRC Project Manager

TRC PM/Supervisor must report all incidents INVOLVING PERSONAL INJURY immediately to:		
TRC Human Resources Manager	Jenny Rue	(949) 341-7436 – office (949) 337-2625 - cell
TRC PM/Supervisor must report all incidents NOT INVOLVING PERSONAL INJURY within 24 hours to:		
TRC Health and Safety Director	Sonya Rieken	(925) 688-2472 – office (925) 260-7637 - cell

3.1 TRC Project Manager/Supervisor

- Overall responsibility for development of a complete and accurate HASP. The HASP shall account for all foreseeable hazards.
- Responsible for the management and technical direction of all aspects of the project.
- Ensure the completion of periodic site inspections.
- Conduct incident investigations.
- Delegate responsibility for field implementation of the HASP to TRC Site Safety Officer.

3.2 Site Safety Officers (SSO) – TRC & Contractor Personnel

- Responsible for the daily implementation of the HASP.
- Ensures HASP is available onsite and that the plan is understood and signed by all personnel entering the site. (See **Attachment F** "Safety Compliance Agreement").
- Conducts (or coordinates the completion of) Tailgate Safety Meetings and ensures documentation of these meeting is available for review.
- Uses JSAs to emphasize hazards and protective measures discussed in the HASP.
- Communicates any revisions to the scope of work or HASP to affected personnel and Project Manager/Supervisor.
- Implements emergency response procedures.

3.3 Assistant Site Safety Officer (Asst SSO) – TRC & Contractor Personnel

- In the event the SSO is not on site, the Assistant SSO will assume the responsibilities of the SSO.

- It is TRC's intent to have a TRC SSO or Assistant SSO available onsite during work activities. On the occasion neither person is physically onsite, they will be available by phone or pager. See "Table 2: Key Project Personnel and Contact Information".

3.4 TRC Employees

- Responsible for understanding and complying with this HASP, including the JSAs.
- Are required to participate in Tailgate Safety Meetings prior to commencement of site work.
- Must acknowledge an understanding of the HASP by signing the "Safety Compliance Agreement" (See **Attachment F**).

3.5 Contractors & Subcontractors

A copy of the HASP will be made available to each designated Contractor/Subcontractor (from now on to be referred to as "Contractors") Site Health and Safety Officer (SSO) prior to coming to the site. Upon review or briefing of the HASP, each contractor and their personnel working at the site will be required to sign the "Safety Compliance Agreement" (See Appendix F) to verify their understanding and willingness to comply with the HASP.

TRC hires Contractors to apply their technical expertise to specific work tasks (i.e. construction, drilling, grading and heavy equipment operation/maintenance). Although TRC has a certain level of knowledge in these areas, the contractor is most knowledgeable of the hazards within their particular area of expertise and is in the best position to implement and monitor an

effective H&S program. Contractors are required to follow and operate within their company's health and safety program and policies. TRC will exercise reasonable care to prevent and detect safety violations on the site. However, direct supervision of contractor employee safety is the responsibility of the contractor.

Contractors are to designate a company representative as their own Site Safety Officer and, if applicable, Assistant Safety Officer. This individual shall monitor the contractor's employees and ensure that safe working procedures are being followed. The Site Safety Officer and, if applicable, Assistant Safety Officer shall be identified to the TRC in writing, either by email, letter or by having the individual sign and provide contact information on "Safety Compliance Agreement" (See **Attachment F**).

Contractors are to:

- Provide a copy of their HASP to the TRC SSO or Project Manager/Supervisor before work commences.
- Provide safety equipment and personal protective equipment for their employees.
- Ensure their equipment is in proper working order and their employees are trained and medically fit to complete the work assigned to them.
- Upon request, provide evidence that personnel working at the site have received the necessary training, certifications and, if applicable, medical surveillance.

The Contractor must inform the TRC SSO if the risks associated with a particular task exceed day-to-day safety requirements and necessitate additional safety precautions to protect the employees performing the particular task. In such cases, TRC may dictate that additional safety precautions be implemented. In the event a discrepancy arises between contractor safety procedures and those of TRC, the more stringent is to be implemented.

3.6 Visitors / Regulatory Agents

- Visitors / regulatory agents will be provided an overview of the basic site safety information. A copy of this HASP will be made available for review.
- All visitors / regulatory agents are required to sign-in on "Safety Compliance Agreement" (See **Attachment F**) each time they enter the project site.
- Visitors / regulatory agents should be escorted by a TRC or designated contractor employee and should not be allowed to move about the site alone.

4.0 COMMUNICATION

Communication is an important aspect of project safety. There are several processes incorporated in this HASP to ensure communication of health and safety hazards.

- Pre-job project planning meetings to discuss the scope of work and potential hazards
- Site walkdowns with the TRC workgroup, subcontractors and the customer/client.
- Development of site-specific HASP and JSAs.
- Communication and acknowledgement of understanding of HASP & JSAs by signing the "Safety Compliance Agreement" (See **Attachment F**)

- Tailgate meetings emphasizing that hazard assessment is a continuous process, and any potentially unsafe actions or condition are to be communicated immediately to the SSO.
- Communicating results of field observations/audits. Visual observations are to be conducted daily by the SSO. Periodic field observations will also be recorded on the TRC Field Observation Form. Results from either observation will be communicated during Tailgate Safety Meetings.

5.0 REVISIONS TO HASP

If a situation arises where the HASP requires revision, the following options are available:

- Except in the case of emergency situations, no deviations from the HASP may be implemented without the prior notification and approval of the TRC Site Safety Officer (SSO).
- If HASP revisions are minor (i.e. not involving significant changes to the scope of work, associated hazards or PPE requirements), the TRC Site Safety Officer (SSO) can make hand-written revisions to the HASP in the field. HASP Revisions must then be communicated to affected personnel and the Project Manager/Supervisor.
- If HASP revisions are substantial (i.e. involving significant changes to the scope of work, associated hazards or PPE requirements), the TRC Site Safety Officer (SSO) must consult with the Project Manager/Supervisor before making revisions. The TRC Site Safety Officer (SSO) can make hand-written revisions to the HASP in the field. HASP Revisions must then be communicated to affected personnel and the Project Manager/Supervisor. It is up to the discretion of the Project Manager/Supervisor whether a revised HASP will be reissued to replace the original HASP on the work site.

6.0 HAZARD ASSESSMENT

Hazard assessment is essential for establishing hazard prevention measures. Below is a list of potential physical, chemical, and biological hazards associated with various TRC project sites. Not all hazards apply to this site-specific HASP. In addition, the list is not all-inclusive and may require additional hazards associated with a particular project/site to be added.

JSAs are included in **Attachment E** of this HASP.

6.1 Physical Hazards

☐ Excavation & trenching (where personnel will be entering the excavation)
☐ Heavy equipment (not drilling related)
☐ Drilling
☐ Overhead lines
☒ Underground utilities
☐ Energy control – lock out / tag out
☐ Flammable atmospheres (> 10% LEL)
☐ Traffic - vehicular and pedestrian
☒ Trips, slips, & falls
☒ Head, foot, eye, and back injuries
☒ Falling objects
☐ Working from elevated surface (greater than 6 feet); fall protection / fall arrest

☐ Ladders use
☒ Sharp objects
☐ Welding hazards
☐ Confined spaces

Equipment (JSAs for specific equipment are included in Appendix E):

☐ Electrical equipment
☐ Hydraulic equipment
☐ Pneumatic equipment
☐ Cutting equipment (non-powered)
☐ Other equipment

6.2 Chemical Hazards

MSDSs can be found in **Attachment B** after the Occupational Health Guidelines and Toxicological Information Table.

☒ Refined Petroleum products / waste oil
☐ Asbestos
☐ Serpentine Soils
☐ PCE, TCE (in groundwater)
☐ Ozone
☒ Environmental samples, soil cuttings, decontamination water, dust (nuisance, silica)
☐ Industrial chemicals - sodium hydroxide, phosphoric acid, flocculant, defoamer

6.3 Biological Hazards

☒ Noise Exposure
☒ Heat Stress
☒ Cold Stress
☒ Weather - heat, cold, rain, fog
☐ Poisonous Plants
☐ Animals/Insects
☐ Misc Pathogens

7.0 GENERAL SAFETY RULES

This section presents general safety rules for all persons working at the project site. Failure to follow safety protocols and/or continued negligence of health and safety policies will result in expulsion of a worker or firm from the site and may result in termination of employment.

1. Horseplay, fighting, gambling or the possession of firearms is not permitted.
2. Work shall be well planned and supervised to prevent injuries. Supervisors shall assure that employees observe and obey safety rules and regulations.
3. An employee reporting for work who, in the opinion of his supervisor, is unable to perform his assigned duties in a safe and reasonable manner shall not be allowed on the job.

4. No employee shall be assigned a task without first having been instructed on proper methods, including safety training, of carrying out the task. Any employee who feels they have not received proper instruction shall notify their supervisor prior to carrying out the task.
5. Injuries and accidents shall be reported immediately to the immediate supervisor, who will then report it to the SSO.
6. There shall be no consumption of food or drink in operational areas of the site. Hands should be thoroughly cleansed prior to eating.
7. Smoking is not permitted on the site.
8. When personnel are conducting hazardous operations, there shall be at least one other person (buddy system) on duty in the immediate area as a backup in case of emergency.
9. Wear required personal protective equipment (PPE) in the workplace when appropriate and/or when specified in the site specific health & safety plan. Loose clothing and jewelry should not be worn when operating machinery.
10. Do not operate any machinery if you are not authorized or qualified to do so. If unsure how to operate a machine or perform any assigned task, ask the Project Manager/Supervisor before proceeding.
11. Do not operate motorized equipment until proper training and certification has been provided (e.g. forklifts, etc.)
12. No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness or other causes that it might unnecessarily expose the employee or others to injury.
13. Alcohol and drugs are strictly prohibited on any TRC premises, customer property, and/or in Company vehicles. Employees shall not report to work under the influence of drugs or alcohol. Employees are prohibited from possessing, using, manufacturing, distributing, dispensing, selling or purchasing illegal drugs or other controlled substances (as defined under federal and state law).

8.0 PERSONAL PROTECTIVE EQUIPMENT

TRC and contractor personnel are required to wear PPE appropriate for the task and potential physical, chemical, and biological exposures. Selection of PPE is based on hazard assessment (i.e. JSAs) and air monitoring.

PPE required by all personnel at all times on the site:
☒ Hard Hat
☒ Safety Shoes/Boots
☒ Safety Vest
☐ Eye Protection - ☐ glasses ☐ goggles ☐ face shield
☐ Hand Protection - ☐ leather ☐ nitrile ☐ other _____
☐ Hearing Protection
☐ Respiratory Protection - ☐ APR Particulate ☐ APR Chemical cartridge ☐ other _____
☐ Protective Clothing - ☐ Tyvex ☐ Nomex ☐ Coveralls ☐ other Level D

PPE which should be available at all times on the site:
☐ Hard Hat

☐ Safety Shoes/Boots
☐ Safety Vest
☒ Eye Protection - ☒ glasses ☐ goggles ☐ face shield
☒ Hand Protection - ☒ leather ☒ nitrile ☐ other _____
☒ Hearing Protection
☐ Respiratory Protection - ☐ APR Particulate ☐ APR VOC cartridge ☐ other _____
☐ Protective Clothing - ☐ Tyvex ☐ Nomex ☐ Coveralls ☐ other _____

9.0 RESPIRATORY PROTECTION

For operations that require the use of a respirator, the TRC and Contractor SSOs must verify that field personnel are medically approved to use respiratory equipment, fit tested, and trained in the proper use of respirators. Only respirators that are NIOSH/MSHA approved are to be used.

Respiratory protection is mandatory if workers are required to complete tasks within a hazardous atmosphere. According to OSHA, a hazardous atmosphere is defined as:

- Flammable gas, vapor, or mist in excess of 10% of LEL.
- Atmospheric oxygen is below 19.5% or above 23.5%.
- When concentration of a known contaminant is greater than the permissible exposure limit (PEL).
- Airborne combustible dust exceeds its LEL (approximated when dust obscures vision at a distance of 5 feet or less).

If conditions warrant, air monitoring may be required to verify the presence or absence of a hazardous atmosphere. Air monitoring is to be conducted whenever a situation or condition arises that could reasonably result in a hazardous atmosphere.

9.1 Air-Purifying Particulate Respirators

Employees involved in construction and earthmoving operations that result in nuisance dust and particulates may use air-purifying respirators. These are commonly referred to as “dust masks” and do not require fit testing. Particulate respirators can to be used in situations where nuisance dust and particulates are the only contaminants posing an inhalation hazard. Particulate respirators are not to be used in oxygen deficient atmosphere or if hazardous levels of gas/vapor contaminants are also present.

A high efficiency particulate air (HEPA), P100 respirator should be used in place of commercially available “dust masks”.

9.2 Air-Purifying Gas/Vapor Respirators

TRC employees and Contractors are required to wear half-face, air-purifying respirators with the appropriate chemical cartridge under the following circumstances:

- When concentration of a known contaminant continuously exceeds permissible exposure limit (PEL) time-weighted average or the threshold limit value(TLV) time-weighted average.
- When volatile organic compound (VOC) vapors in the work area continuously exceed the threshold limit value- time-weighted average (TLV-TWA) for gasoline (300 parts per million [ppm]).

- When, at any time, VOC vapors in the work area exceed the threshold limit value - short-term exposure limit (TLV-STEL) for gasoline (500 ppm).

See **ATTACHMENT B** for additional information and regulatory exposure limits for chemicals of concern at this site.

Air purifying respirators (APRs) with chemical cartridges can be used under the following conditions:

- If the oxygen concentration is between 19.5% and 23.5%.
- If chemical contaminants have been identified.
- The toxic concentrations are known and the respirator cartridges are effective in removing the contaminants.
- The respirator and cartridges are NIOSH/MSHA approved.
- The contaminants have noticeable warning qualities such as odor and visibility characteristics including color.

In the event workers are required to wear air purifying respirators (APRs) with chemical cartridges, the following requirements must be met:

- The TRC or Contractor SSO must verify that workers are:
  - Medically approved (within one year) to use respiratory protection.
  - Fit-tested for the specific respirator to be used.
  - Trained in the proper use and limitations of the respirator to be used.
- Contractors must provide proof of the above to the TRC SSO, upon request.
- If an employee or contractor has not cleared by the SSO to use a respirator, they will not be assigned tasks that may potentially expose them to contaminants.
- Personnel with interfering facial hair are not permitted to wear respirators and shall not be permitted in areas where respiratory protection is required.

9.3 Air-Supplied Respirators

Air-supplied respirators, such as SCBA or airline, full-face respiratory protection, are not anticipated to be required at the site. This level of respiratory protection is utilized in oxygen deficient atmospheres or atmospheres considered to be at or above immediately dangerous to life and health (IDLH) levels. These conditions will only occur in rare, if any, circumstances such as confined space entry or emergency situations. The use of air-supplied respiratory protection is not permitted without approval and guidance from the Project Manager.

10.0 AIR MONITORING

Air monitoring is required to verify the presence or absence of a hazardous gas/vapor atmosphere whenever a situation or condition arises that could reasonably result in a hazardous atmosphere.
Based on OSHA's definition of a hazardous atmosphere, there are 4 different hazards that require monitoring. The table below describes the type of hazard, what air monitoring equipment to use and what levels constitute a hazard. The information provided in the table does not take into consideration all the possible variations of hazardous atmosphere; however it

will provide guidance when determining the presence of a hazardous atmosphere. Any questions or concerns should be directed to the SSO before work begins.

Table 3: Air Monitoring Guidance

Hazard	Appropriate Air Monitoring Equipment	Hazardous Levels	Comments
Flammability	Combustible gas indicators (CGI) are direct-reading instruments; measures % LEL and oxygen.	>25% of the LEL during cold work >10% of the LEL during hot work	Since many flammable vapors are heavier than air, be sure to take readings at ground level. Work be suspended if CGI readings exceed 10% of LEL.
Oxygen deficiency or abundance	Same as above or an Oxygen Meter	<19.5% and >23.5%	Concentrations >23.5% may present an increased flammability hazard.
Exceeding the permissible exposure limit (PEL)	Photoionization detector (PID) can detect organic and inorganic vapors/gases	Varies depending on chemical. See **Attachment B** for hazardous levels of common chemicals	It is impossible to differentiate the different chemicals using a PID meter. However, the PID will indicate whether chemicals are present and at what levels. Measurements taken within worker's breathing zone will be used to determine respiratory protection requirements.

Airborne combustible dust is not anticipated at the work site.

When conducting, air monitoring the following actions should be considered:

- Be familiar with the proper use and limitations of the air monitoring equipment to be used.
- Ensure air-monitoring equipment (TRC's or otherwise) is in working order and has been properly calibrated. The TRC SSO is to document verification of calibration (i.e. in a field log book).
- Clearly document the results of air monitoring, including:
  - Equipment name / type and calibration data
  - Date, time and site location of air monitoring (use a site map to clarify the locations of readings.
  - Indication of what is being measured (LEL, oxygen, or ppm)
  - Results of the air monitoring
- Measurements for volatile organics should be taken at low point where vapors could accumulate.
- Measurements taken to determine the need for respiratory protection should be take within the worker's "breathing zone", keeping in mind the worker's closest proximity to the hazard source.
- An individual should never enter a confined area or excavation in order to conduct initial air monitoring. Instead, actions should be taken to lower the air monitoring equipment into the area to indicate the presence (or absence) of a hazardous atmosphere. Most air monitoring equipment has audible alarms.
- In the event that CGI readings on the site exceed 10 percent of the LEL, work will be suspended until the source can be eliminated or controlled.

11.0 SITE CONTROL

The primary objective of site control is to minimize the exposure to potentially hazardous substances and/or situations. Supervision and controlling access to the work site is necessary to protect site personnel, visitors and the public.

For this site, the following areas will be designated as hot, warm and cold zones:

Hot Zones: An exclusion zone around each boring location whose edge is at least 10 feet away from the rig
Warm Zone: ☒ NA
Cold Zone: All other site locations

For the purposes of this HASP, site control will be discussed under two circumstances: (1) work involving physical hazards and (2) work involving chemical hazards.

In either case, site control areas are to be clearly identified and communicated by the SSO. The hot zone must be clearly identified and should be isolated with cones, barricades, or high visibility caution tape. In addition, sufficient area also must be available to conduct operations while providing a protective buffer for persons and property outside the controlled areas.

☒ Work involving Physical Hazards

Work does *not* involve direct contact with hazardous substances. However, if the scope of work primarily involves physical hazards (i.e. vehicular traffic, heavy equipment operation, etc.), the establishment of a warm zone is not necessary. Instead, a hot zone must be established to surround all the physical hazards. The hot zone area shall provide enough room and buffer to protect both workers and the public. A cold zone is established outside the hot zone to allow "support" activities to be conducted in a safe location.

☐ Work involving Chemical Hazards

The concept of site control and the establishment of hot/warm/cold work zones are intended for work involving the exposure (or potential exposure) to hazardous chemical concentrations. Under these circumstances, the purpose of work zones is two-fold: 1) minimize the exposure to potentially hazardous substances and 2) minimize the spread of hazardous substances outside the immediate work area through decontamination procedures.

A brief overview of site control work zones is provided below:

Hot Zone

- Where personnel may be subject to chemical or physical hazards.
- Where known or suspected contamination exists and may also be where equipment operation and/or environmental sampling will take place.
- To be clearly identified and should be isolated with cones, barricades, or high visibility caution tape.
- Large enough to provide sufficient room and buffer to protect both workers and the public.

Warm Zone

- Located between the hot and cold zones; beginning at the edge of the hot zone and extends to the cold zone.
- Utilized as a control point or corridor for persons entering or exiting the hot zone.
- Where personnel and equipment are decontaminated.

Cold Zone

- Located outside the hot zone where administrative and other support functions are located.
- Where adverse exposure to contaminants and physical hazards are unlikely.

11.1 Decontamination

The purpose of decontamination is to: (1) remove chemical containments from personnel and/or equipment and (2) significantly reduce the spread of chemical contaminants beyond the hot/warm zone.

Decontamination is intended to occur within the warm zone. Depending on the project, there may be a need to decontaminate both personnel and equipment. The decontamination process should be appropriate to the chemical hazards present. For example refined petroleum contaminated soil on work boots/shoes may only require physical removal of the soil with a sturdy brush. However, decontamination of equipment (i.e. drilling augers) may require additional steps to ensure contaminants are not spread beyond the hot/warm zones. Heavy equipment (i.e. excavators, trucks used for waste transportation, etc.) may require a combination of steps, including the placement of gravel at the entrance/exit of the site.

Personnel Decontamination Procedures:

Remove contaminated items (i.e. gloves) in an "inside out" manner. Contaminated garments are to be placed in designated plastic bags or drums prior to disposal or transfer offsite.

Equipment Decontamination Procedures:

The augurs and tools will be decontaminated prior to starting work and before each new boring is commenced using a stem cleaner. Prior to use, the sampler and sampling tubes are brush-scrubbed in a Liquinox and potable water solution and rinsed twice in clean potable water. Sampling equipment and tubes are also decontaminated before each sample is collected to avoid cross-contamination between borings. Decontamination water will be transferred from the driller's decontamination trailer to a drum via five gallon buckets, properly labeled, and stored onsite, in appropriate storage area, pending disposal to an approved disposal/recycling facility.

11.2 Site Security

Appropriate security measures will be established in coordination with the site owner/operator and communicated to site personnel. The objective of these measures is to (1) protect the public from potential exposure to physical/chemical hazards; (2) avoid public interference with personnel and safe work practices; and (3) prevent theft or vandalism of equipment at the site.

Site specific security measures include:

- ❑ Set up exclusion zone using barricades, delineators, cones, or high visibility caution tape
- ❑ Locking any unattended vehicles and/or equipment

12.0 PERSONNEL TRAINING

TRC and contractor personnel are required to acknowledge their understanding and willingness to comply with this HASP before admission to the site by signing the "Safety Compliance Agreement" (See **Attachment F**).

Site specific training requirements are indicated below:

☒ Personnel shall meet the training requirements specified in the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard [29 CFR 1910.120(e) and CCR Title 8 Section 5192(e)].

☐ Kinder Morgan Contractor Safety Video

☐ ConocoPhillips (specify type of training)

☐ ExxonMobil (specify type of training)

☐ Refinery Training

☒ Railroad Training:

- ☐ UPPR Contractor Orientation
- ☒ BNSF Contractor Orientation
- ☐ Cal Train Contractor Orientation
- ☐ "FRA Roadway Worker" Training (works within 25' of track)

☐ Other Training Requirements

13.0 MEDICAL PROGRAM

TRC has established a medical surveillance program to assess, monitor, and help protect the health of employees, in particular, employees who may be exposed to potentially hazardous substances during site work. Personnel undergo medical examinations as follows:

- ❑ **Initial:** Pre-employment / prior to any assignment involving work in a hazardous or potentially hazardous environment. The initial examination is used to establish a baseline picture of health against which future changes can be measured, and to identify any underlying illnesses or conditions that might be aggravated by chemical exposures or job activities. This exam also certifies whether an employee is medically fit to wear a respirator.

- ❑ **Periodic:** At least once every 12 to 24 months (depending on the employee's involvement in field activities) to measure changes in health status. This exam certifies whether an employee is still medically fit to wear a respirator.

- ❑ **Upon notification:** As soon as possible upon notification by an employee that they have developed signs or symptoms indicating possible overexposure to hazardous substances, or in response to an injury or exposure during an emergency situation.

- ❑ **Exit**: At termination of employment.

14.0 EMERGENCY RESPONSE PLAN

The TRC SSO (depending on which is present) will have controlling authority during an emergency. In the SSO's absence, the Alternate SSO will be in charge.

14.1 Evacuation Protocol

Evacuation protocol, routes and assembly areas from the site will be established by the SSO, and communicated to Field Personnel during the Tailgate Safety Meeting(s) prior to initiating work. In the event of an evacuation, personnel will meet at a pre-established assembly areas and the TRC SSO conduct a "head count" to see that everyone is accounted for. Contractor SSO is responsible for being able to provide an accurate head-count of contractor personnel.

Primary assembly area – Yard house near Sherman Street.

Secondary assembly area – Concrete pad near Constitution Way.

14.2 First Aid & CPR

TRC employees and contractors with current First Aid and CPR certification and who are willing to provide First Aid and CPR will be asked to identify themselves at Tailgate Safety Meetings. Their names will be documented on the Tailgate Meeting Checklist (**Attachment F**).

14.3 Emergency Medical Assistance

A list of emergency medical assistance sources has been established as part of this HASP. ATTACHMENT C lists the names, locations, and telephone numbers of emergency response organizations in the vicinity of the project site, and a map to the nearest hospital(s) with an *emergency room*.

A vehicle shall be available onsite during work activities to transport injured personnel to the identified emergency medical facilities, if necessary. Company vehicles are to be equipped with a fire extinguisher and first aid kit.

14.4 Emergency Procedures

In the event of an accident, injury or other emergency, remember to:

- **Stop work and REMAIN CALM.**
- **Move personnel to a safe location (evacuation plan).**
- **Call 911 or notify other emergency facilities, as necessary.**
- **Address medical emergencies and apply first aid, if necessary.**
  - Move injured or exposed person(s) from immediate area only if it is safe to do so.

- If serious injury or life-threatening condition exists, call 911. Clearly describe the location, injury and conditions to the dispatcher. Designate a person to direct emergency equipment to the injured person.

- **Contain physical hazards.**
  - Act only if hazard is minimal and you are trained to deal with the situation. Otherwise evacuate and wait for emergency services to arrive.
- **Notify SSO and initiate incident reporting procedures.**
  - See page 2 of this HASP for contact information. In the event the SSO is not available, the order of notification should be 1) Assistant SSO, 2) TRC Project Manager and 3) HR Manager (if incident involves injury) or EHS Supervisor (if incident does not involves injury).
  - TRC SSO is to notify TRC Project Manager/Supervisor as soon as reasonably possible.
- Do not resume work until the SSO has determined it is safe to do so.

15.0 INCIDENT REPORTING

In case of an accident, TRC personnel are to immediately report the incident to their Project Manager/Supervisor and follow the TRC incident reporting procedures detailed in the TRC IIPP. TRC's incident reporting forms are available through the Project Manager/Supervisor and include:

- TRC Incident Report
- Driver's Report of Accident
- TRC Potential / Near Miss Reporting Form
- TRC Employees Report of Incident
- TRC Witness Report of Incident
- Corrective Action Form

All incidents and near misses are investigated in accordance with TRC's IIPP. The TRC Incident Report Form is to be completed and submitted to the TRC EHS Supervisor within 24 hours following any incident.

Contractor personnel are to report incidents to their SSO who is then required to report the incident to the TRC SSO, TRC Alternate SSO or TRC Project Manager immediately.

Some important information to include when reporting an incident is:

1. A description of the event (including date and time)
2. Details regarding personal injury and property damage, if any.
3. Whether emergency services were notified (i.e., medical facilities, fire department, police department) and the basis for that decision. Including time and names of persons/agencies notified, and their response.
4. Clarify the need for and type of TRC support.
5. Immediate corrective action(s) taken.

16.0 HEALTH AND SAFETY PLAN (HASP) SIGNATURE PAGE

Job Safety Analysis Author	**Date:**	**HASP Author**	**Date:**
Rachelle Dunn		Rachelle Dunn	
_____	_____	_____	_____

Review/Approvals:

Site Safety Officer Facility/Field Supervisor	**Date:**	**Project Manager/Supervisor***	**Date:**
Rachelle Dunn		Keith Woodburne	
_____	_____	_____	_____
Local Safety Coordinator* ☒ **NA**	**Date**	**EHS Supervisor/Safety Professional (CIH, CSP, other)*** ☒ **NA**	**Date**
_____	_____	_____	_____

Additional Information or Instructions:

_____

_____

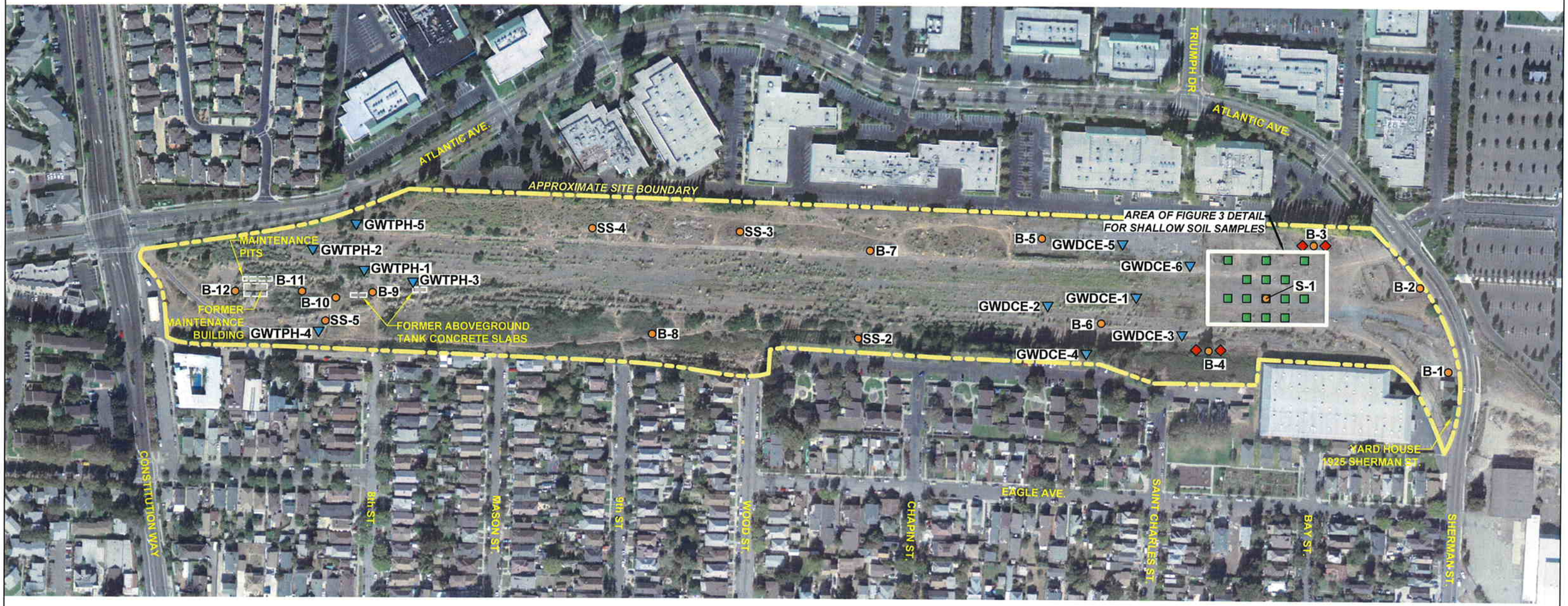
_____

_____

* Note: **For most projects, the Project Manager/Supervisor will review, approve and sign the HASP.** In the event the operations are beyond the normal scope of work, additional review is available upon the request from the PM/Supervisor. The Local Safety Coordinator is the first recourse for reviewing HASPs **not** involving high-risk operations. It is recommended that for HASPs involving high-risk operations (i.e. hazardous exposures to chemicals, large scale or deep excavations, confined space entry, etc.), the EHS Supervisor and/or a Safety Professional [Certified Industrial Hygienist (CIH), Certified Safety Professional (CSP) or other professionally qualified person] be consulted for review of the HASP to ensure proper protective measures are being implemented.

ATTACHMENT A

SITE PLAN



LEGEND

- Approximate soil sample location (URSGWC, March 1999)
- Approximate groundwater sample location (URSGWC, June 1999)
- Approximate surface soil sample location (URSGWC, June 1999)
- Proposed soil sampling location

N

APPROXIMATE SCALE (FEET)

0 250 500

AERIAL PHOTO SOURCE: Maptech, February 2004

SITE PLAN

Alameda Belt Line Site
1925 Sherman Street
Alameda, California

TRC

FIGURE 2

ATTACHMENT B

OCCUPATIONAL HEALTH GUIDELINES AND TOXICOLOGICAL INFORMATION

Attachment B

OCCUPATIONAL HEALTH GUIDELINES AND TOXICOLOGICAL INFORMATION

Gasoline Constituents

Contaminant	ACGIH TLV-TWA (ppm)	NIOSH REL (ppm)	OSHA PEL (ppm)	STEL (ppm)	IDLH (ppm)	Routes of Exposure	Known or Suspected Carcinogen	Symptoms
Arsenic	na	0.002	0.01	na	100	Inhalation, Ingestion, Contact	Yes	Ulceration of the nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyper-pigmentation of skin.
Lead	0.100	0.100 (10-hour)	0.050 (8-hour)	100	100	Inhalation, Ingestion, Contact	No	Weak, lassitude, insomnia; facial pallor; anorexia, low-weight, malnutrition; constipation, abdominal pain; anemia; gingival lead line; tremor; paralysis of the wrist, ankles; encephalopathy; kidney disease; irritation to eyes; hypotension
Diesel (as Stoddard solvent)	for Diesel fuel/ Kerosene 14.4 (skin only)	Approx. 60-98	500	250-500 (NIOSH ceiling)	Approx. 3000-5600	Inhalation, Ingestion, Contact	No	Irritation to eyes, skin, mucous membrane; dermatitis, headache, fatigue, blurred vision, dizziness, slurred speech, confusion, convulsions, aspiration, weakness, restlessness, incoordination
Gasoline	300	n/a	500	n/a	n/a	Inhalation, Absorption, Ingestion, Contact	Yes	Irritation to eyes, skin, mucous membrane; dermatitis, headache, fatigue, blurred vision, dizziness, slurred speech, confusion, convulsions, aspiration

DEFINITIONS

ACGIH TLV-TWA	American Conference of Governmental Industrial Hygienists, Threshold Limit Value-Time Weighted Average
NIOSH REL	National Institute of Occupational Safety & Health, Recommended Exposure Limit
STEL	Short Term Exposure Limit (Gasoline STEL is by ACGIH; BTEX STELs are by NIOSH)
OSHA PEL	Occupational Safety and Health Administration, Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health
ppm	parts per million
CNS	Central Nervous System
n/a	not available (i.e., no value has been established)

Threshold Limit Value: Threshold limit values (TLVs) refer to airborne concentrations of substances and represent conditions under which it is believed nearly all workers may be repeatedly exposed, day after day, without adverse health effects.

Threshold Limit Value - Time Weighted Average: The time weighted average (TWA) is a concentration for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect. TLV-TWAs are established by the ACGIH.

Recommended Exposure Limit: Unless otherwise noted, the recommended exposure limit (REL) is a TWA concentration for up to a 10-hour workday during a 40-hour workweek. RELs are established by NIOSH to reduce or eliminate adverse occupational health effects.

Short Term Exposure Limit: A short term exposure limit (STEL) is defined as a 15-minute TWA exposure that should not be exceeded at any time during a workday. When compared to the REL (or TLV-TWA for ACGIH standards), the STEL allows the worker to be exposed to a higher concentration, BUT for a shorter period of time. Exposures above the REL up to the STEL should not be longer than 15 minutes and should not occur more than four times per day.

Permissible Exposure Limit: Permissible exposure limits (PELs) are TWA concentrations that must not be exceeded during any 8-hour work shift of a 40-hour workweek. PELs are established by OSHA (29 CFR 1910.1000).

Immediately Dangerous to Life and Health: Immediately dangerous to life and health (IDLH) values are established as concentrations from which a worker can escape within 30 minutes without suffering loss of life, irreversible health effects, or other deleterious effects that could prevent him/her from escaping the hazardous environment. The purpose of establishing an IDLH exposure concentration is to ensure that workers can escape from a given contaminated environment in the event of failure of respiratory protection equipment.

ATTACHMENT C

EMERGENCY SERVICES
PHONE NUMBERS AND DIRECTIONS

EMERGENCY SERVICES

FACILITY / LOCATION **TELEPHONE**

Emergency Situation 911

Hospital (with 24-Hour Emergency Services):

Alameda Hospital 1-510-522-3700
2070 Clinton Ave
Alameda, CA

Directions:

1. Start at **1925 SHERMAN ST, ALAMEDA** going toward **EAGLE AVE** - go **0.5** mi
2. Turn **LEFT** on **ENCINAL AVE(CA-61)** - go **0.6** mi
3. Turn **RIGHT** on **CHESTNUT ST** - go **0.2** mi
4. Turn **LEFT** on **CLINTON AVE** - go **0.1** mi
5. Arrive at **2070 CLINTON AVE, ALAMEDA,** on the **RIGHT**

Distance: 1.4 miles Time: 5 mins (approx.)

Poison Control Center: Emergency 24-Hour Hotline..... ..... (800) 876-4766
California Poison Control System - San Francisco Division..... (415) 502-6000
at San Francisco General Hospital
University of California San Francisco
Box 1369
San Francisco, California 94143-1369

Office of Emergency Services: Hazardous Materials Spill Notification.....(800) 852-7550

TRC 24 HOUR Notification Number..... ..(800) 274-9072

Bay Area Emergency Phone Numbers

Alameda (510) 337-2100
Alameda Co. (510) 667-7721
- Castro Valley
- San Lorenzo

Antioch (925) 757-1313
Bakersfield (661) 861-2521
Belmont (650) 592-2222
Benicia (707) 745-2424
Berkeley (510) 642-3333
Burlingame (650) 368-1421
Clovis (559) 348-1515
Contra Costa Co. (925) 933-1313
- Pittsburg
- Concord
- San Ramon

Contra Costa Co. (510) 223-4422
- Richmond
- San Pablo

Cupertino (408) 2993144
Daly City (650) 992-2313
Danville (925) 373-5400
Dublin (925) 447-4257
Fairfield (707) 428-7300
Foster City (650) 368-1421
Fremont (510) 793-3434
Fresno (559) 294-2009
Gilroy (408) 546-0400
Hayward (510) 732-2626
Hollister (831) 636-4325
Livermore (925) 447-4257
Marin Co. (415) 472-0911
Menlo Park (650) 321-2231
Millbrae (650) 697-1212
Milpitas (408) 998-7212
Modesto (209) 552-2474
Morgan Hill (408) 299-3144
Mountain View (650) 903-6395
Napa (707) 253-0911
Newark (510) 793-3737
Oakland (510) 444-1616
Pacifica (650) 355-4151
Palo Alto (650) 321-2231
Pleasanton (925) 838-6691
Redwood City (650) 368-1421
Sacramento (916) 228-3000
San Carlos (650) 802-4255
San Francisco (415) 861-8020
San Jose (408) 277-8991
San Leandro (510) 618-3790
San Mateo (650) 368-1421
Santa Clara (408) 299-3144
Santa Cruz (831) 471-1170
Santa Rosa (707) 576-1365
South San Francisco (650) 873-3333
Stanislaus Co. (209) 552-3911
- Modesto
- Ceres
- Turlock
- Oakdale

Stockton (209) 464-4646
Sunnyvale (408) 736-6244
Tracy (209) 831-4553
Union City (510) 471-1441
Vacaville (707) 449-5452
Vallejo (707) 552-3285
Visalia (559) 734-8116

New numbers added after 11/12/2007

ATTACHMENT D

LOCAL AREA MAP
with routes to hospital

ATTACHMENT E

JOB SAFETY ANALYSES

JOB SAFETY ANALYSIS

COMPANY/ PROJECT NAME or ID/ LOCATION (City, State)	DATE PREPARED FOR HSP:	☐ NEW ☒ REVISED from S: Drive
CCT Alameda Belt Line, Alameda, California	3/12/08	
JSA WORK ACTIVITY (Description): Shallow Soil Sampling	List of Contractor(s) and key work activity: None	

SITE SPECIFIC JSA AUTHOR	POSITION / TITLE	DEPT	SIGNATURE
Rachelle Dunn	Senior Staff Geologist	Concord	

"TRC APPROVED" JSA DEVELOPMENT TEAM	POSITION / TITLE	APPROVAL DATE
Adrienne Collins	Concord Safety Coordinator	
Sonya Rieken	EHS Advisor	

Required PPE (indicate with "R") vs. Must Have Available On-site (indicate "A")

R HARD HAT R /A GLOVES Specify: ☒ leather ☒ Nitrile ☐ Other _____. R SAFETY GLASSES _____GOGGLES _____FACE SHIELD	R REFLECTIVE VEST A HEARING PROTECTION R SAFETY SHOES: Protective Toe _____ 5pt.HARNESS / LANYARD PPE CLOTHING: ____Coveralls ____Tyvek Suit ____Nomex ____Other (specify):	RESPIRATORY PROTECTION: ☒ NA _____½ face Air Purifying Respirator (APR) _____Particulate Mask: ☐ PM100 ☐ PM95 _____ Cartridge: ☐ VOC ☐ _____ _____Full face ARP; specify cartiridge type: _____ Air Supplied Respirator ____SCBA ____Air-line	Additional PPE:

Always perform a Safety Assessment: 1) prior to starting work; 2) when changing tasks; and 3) throughout the day. Focus on each new task, procedures, and skill sets to be used.

[1] JOB TASKS	[2] POTENTIAL HAZARDS	[3] HAZARD CONTROLS (beyond wearing "Required" PPE)
1. Set up Job Site	a. Physical Injury from being struck by moving vehicles or equipment.	a. Have one person watch traffic while the other creates exclusion zone in a high-use traffic area. a. Create an exclusion zone at least 10-feet beyond the limits of the sampling location; use snow fencing, barricades, delineators, cones and/or caution tape in accordance with project specifications. a. Always wear safety vest. a. Vehicles shall use reverse beepers or flagmen.
2. Soil Sampling	a. Contact with subsurface water, gas, electrical, and/or fiber optic lines in the vicinity of sampling locations. b. Pinched/smashed fingers with slide hammer. c. Contact with chemical contamination. d. Overspray and cross-contamination during slide hammer decontamination	a. If unknown lines or obstructions are encountered, stop work and notify PM. Do not undermine any utilities. b. Be aware of placement of fingers and other body parts prior to pushing slide on slide hammer. b. Where leather gloves over nitrile gloves when using slide hammer. c. Wear nitrile gloves when handling water or soil. Wear required PPE, including safety glasses, while on job site. d. Safety glasses, splash goggles, or face shield will be worn at all times when spraying/decontaminating slide hammer. d. Do not overspray while cleaning slide hammer. Create a "clean zone" with plastic liner beneath area where decontamination bucket is placed before decontamination begins.
Field Changes: 3.	a. b. c. d.	a. b. c. d.

[1] List all activities/steps which present a significant hazard, preferably in sequence. FOCUS ON POTENTIALLY HAZARDOUS ACTIVITIES; not the trivial ones. Apply common, yet knowledgeable & informed, sense to identify what could reasonably be expected to cause danger.

[2] CONCENTRATE ON SIGNIFICANT HAZARDS. What can go wrong? How can someone get hurt? Can someone be struck by or strike an object? caught on, in or between objects?; fall to ground or lower level?; experience excessive strain or stress? Be exposed to inhalation or skin hazards. Specify the hazards; be descriptive.

[3] Describe actions, procedures or limits necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable and quantified terms. Avoid subjective general statements such as, "be careful" or "use as appropriate".

JOB SAFETY ANALYSIS

GENERAL SAFETY HAZARDS	LOCATION(S) WHERE HAZARD IS TO BE EXPECTED	[3] HAZARD CONTROLS (beyond wearing "Required" PPE)
5. Slips, trips, and falls	a. In exclusion zone	a. Clean as you work. Put equipment away when done using it. Blot up puddles of standing water and sweep work area. a. Cover or use appropriate warning to protect all unattended open holes.
6. Cut/Pinched fingers or toes	a. Throughout work area; particularly when moving materials.	a. Wear leather gloves when lifting sharp or heavy equipment.
7. Strained muscles.	a. Throughout work area	a. Use proper lifting techniques; get help when moving heavy objects (>70 lbs).
8. Unauthorized Personnel in exclusion zone	a. In exclusion zone	a. Use visitor check-in log; do not allow anyone in exclusion zone without proper PPE and training documentation. (HAZWOPER).
9. Flying debris	a. In exclusion zone	a. Wear ANSI-approved safety glasses working around operating equipment.
10. Loud Noise	a. In exclusion zone	a. Wear ANSI-approved hearing protection around operating equipment.
11. Explosion/Fire	a. In exclusion zone	a. No smoking or open flame. Periodically monitor ambient air concentrations with PID/LEL Meter. Shut down job and move personnel and equipment upwind if hydrocarbon concentrations are **> 300 ppm or >10% of LEL.** a. Place 2-20lb ABC Fire extinguishers in location specified by SSO. a. Follow TRC's Cell Phone Use Guidelines.
12. Exposure to hydrocarbon impacted soil or groundwater	a. In exclusion zone	a. Wear nitrile gloves during handling of soil or groundwater.
13. Soil and groundwater cross-contamination	a. In exclusion zone	a. Identify and delineate soil stockpile area or storage area of drummed soil cuttings/decontamination water.

Field Notes:

LIMITATION: As part of TRC's EHS Policy, a JSA is provided by TRC for its employees. The purpose of a JSA is NOT to identify all hazards associated with a task, but to identify key potential hazards to get TRC and other onsite personnel thinking about other potential safety hazards and mitigating actions for unsafe conditions and behavior during various works. TRC recognizes that JSA's may not cover every conceivable step or hazard that emerges during a job, so we've provided a "Field Change" section below to amend a JSA if required. The JSA does not supersede or replace any local, state or federal permit, regulation, statute or other entities policies and procedures but is simply a tool for enhancing the execution of safe work at a jobsite under TRC's supervision. Similarly, all subcontractors are required to provide their own JSA(s) for their specialty prior to performing any work for TRC or its customers in accordance with TRC's EHS Policy; however, any unsafe condition or hazard not covered in any JSA is ultimately the direct responsibility of the person or entity performing the work.

[1] List all activities/steps which present a significant hazard, preferably in sequence. FOCUS ON POTENTIALLY HAZARDOUS ACTIVITIES; not the trivial ones. Apply common, yet knowledgeable & informed, sense to identify what could reasonably be expected to cause danger.

[2] CONCENTRATE ON SIGNIFICANT HAZARDS. What can go wrong? How can someone get hurt? Can someone be struck by or strike an object? caught on, in or between objects?; fall to ground or lower level?; experience excessive strain or stress? Be exposed to inhalation or skin hazards. Specify the hazards; be descriptive.

[3] Describe actions, procedures or limits necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable and quantified terms. Avoid subjective general statements such as, "be careful" or "use as appropriate".

ATTACHMENT F

TAILGATE SAFETY MEETING CHECKLIST

AND

HASP COMPLIANCE AGREEMENT

TAILGATE SAFETY MEETING CHECKLIST

Date / Time of Tailgate Meeting: _____

- ☐ **Vehicle Inspection:** Driver will perform Driver's Daily Vehicle Inspection Checklist before leaving the yard or if changing drivers during the day.
- ☐ **Personnel training/qualifications:** Check cards for OSHA HAZWOPER 40-hour certification/8-hour-refresher training (or any other specialized training to perform the task if appropriate). TRC personnel have been trained on the Company's Drug and Alcohol Policy and will inform all site personnel.
- ☐ **Supplies:** Indicate location of first aid kit, fire extinguisher, clean water supply (drinking, eye wash), and Site Health and Safety Plan (HASP).
- ☐ **Emergency services:** Discuss location of nearest telephone and directions to hospital. Map, directions, phone numbers are provided in the HASP (Attachment C).
  The TRC Emergency Twenty-four Hour Number is 1-800-274-0972.
  - **First-Aid/CPR volunteers:** _____

    _____

- ☐ **Site background:** Discuss types, locations, and concentrations of chemicals found onsite, presence of free product, depth to groundwater, etc.
- ☐ **Offsite Permits/Access Permits:** Discuss any permitting requirements for the site.

Work activities: Discuss scope of work for the day and activities to be performed.

- ☐ **Potential hazards: Review JSAs.** Discuss physical, chemical and biological hazards. Discuss the prohibiting of any eating, drinking, and/or smoking in the work zone.

- ☐ **Personal protective equipment (PPE):** Discuss required level of protection; review additional PPE requirements in JSAs, as needed.

  ☒ Hard Hat ☒ Safety Shoes/Boots ☒ Safety Vest ☒ Hearing Protection

  ☒ Eye Protection - ☒ glasses ☐ goggles ☐ face shield

  ☒ Hand Protection - ☒ leather ☒ nitrile ☐ other _____

  ☐ Respiratory Protection - ☐ APR Particulate ☐ APR Chemical cartridge ☐ other

  ☐ Protective Clothing - ☐ Tyvex ☐ Nomex ☐ Coveralls ☐ other Level D
- ☐ **Utilities:** Utilities have been cleared/marked by appropriate divisions.
- ☐ **Traffic control** (vehicular and pedestrian): Work area is properly delineated and cordoned off from traffic. Technician will put a traffic cone at all four corners of his parked vehicle. Upon completion of work, walk around vehicle to pick up cones and check all four sides and underneath vehicle for obstacles prior to moving truck.
- ☐ **Dispenser Emergency Shut-off Switch:** Location has been identified/communicated with field personnel.
- ☐ **Dealer Notification:** Notify dealer/owner of site work activities to be performed.

HASP COMPLIANCE AGREEMENT

By signing below, I have completed the Tailgate Safety Meeting Checklist, reviewed this Site Health and Safety Plan and the Job Safety Analysis (JSA) and understand their contents. I hereby agree to comply with all safety requirements outlined herein:

TRC

Signature: _____, Site Safety Officer (SSO)

Print Name: _____ Date: _____

Signature: _____, Asst. Site Safety Officer (Asst. SSO)

Print Name: _____ Date:_____

Contractor:

Signature: _____, Site Safety Officer (SSO)

Print Name: _____ Date:_____

Signature: _____, Asst. Site Safety Officer (ASSO)

Print Name: _____ Date:_____

Contractor:

Signature: _____, Site Safety Officer (SSO)
Print Name: _____ Date:_____

Signature: _____, Asst. Site Safety Officer (ASSO)

Print Name: _____ Date:_____

TRC Employees / Contractor Personnel / Visitors

Signature: _____Date:_____

Print Name: _____Company:_____

HASP COMPLIANCE AGREEMENT (cont.)

By signing below, I have completed the Tailgate Safety Meeting Checklist, reviewed this Site Health and Safety Plan and the Job Safety Analysis (JSA) and understand their contents. I hereby agree to comply with all safety requirements outlined herein:

TRC Employees / Contractor Personnel / Visitors (cont.)

Signature: _____Date:_____
Print Name: _____Company: _____

Signature: _____Date:_____
Print Name: _____Company: _____

Signature: _____ Date: _____
Print Name: _____Company: _____

Signature: _____Date: _____
Print Name: _____Company: _____

Signature: _____Date:_____
Print Name: _____Company: _____

Signature: _____Date:_____
Print Name: _____Company: _____

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Print Name: _____Company: _____

Signature: _____Date:_____
Print Name: _____Company: _____

Signature: _____Date: _____
Print Name: _____Company: _____