ConocoPhillips
76 Broadway
Sacramento, California 95818

March 12, 2007

Ms. Donna Drogos
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Report Transmittal**
Offsite Groundwater Investigation Work Plan
76 Service Station# 3538
411 W. MacArthur Boulevard
Oakland, CA

Dear Ms. Drogos:

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.

Sincerely,

Eric G. Hetrick
Site Manager
Risk Management & Remediation

1590 Solano Way
#A
Concord, CA 94520

925.688.1200 PHONE
925.688.0388 FAX

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March 8, 2007 TRC Project No. 42-0142-15

Ms. Donna Drogos
Supervising Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

SITE: 76 SERVICE STATION #3538
411 WEST MACARTHUR BLVD
OAKLAND, CALIFORNIA

RE: OFFSITE GROUNDWATER INVESTIGATION WORK PLAN

Dear Ms. Drogos:

On behalf of ConocoPhillips Company (ConocoPhillips), TRC submits this work plan for the offsite groundwater assessment at 76 Station No. 3538, located at 411 West MacArthur Blvd, Oakland, California (Figure 1).

1.0 PROJECT OBJECTIVES AND SCOPE OF WORK

The objective of this assessment is to characterize lateral and vertical distribution of dissolved-phase hydrocarbons, including methyl tertiary butyl ether (MTBE) and fuel oxygenates, in offsite groundwater.

The scope of work for this assessment includes the following:

- Installation of two offsite groundwater monitoring wells.
- Collection of soil and groundwater samples for analysis at a state-certified laboratory.
- Preparation of a final technical report documenting soil boring activities, well installation and development, groundwater sampling procedures, laboratory results, waste characterization, and disposal.

2.0 SITE DESCRIPTION

The subject site was a former Tosco (76) service station, and is located on the southwest corner of MacArthur Boulevard and Webster Street in Oakland, California (Figure 1). The site is currently a used car sales lot and is entirely fenced. All petroleum storage and dispensing equipment were removed in September of 1998 during station demolition activities. Six groundwater monitoring wells are present at and in the site vicinity (Figure 2).

2.1 Geology and Hydrogeology

Based on review of regional geologic maps the site is underlain by Late Pleistocene Alluvium. This Alluvium is considered to be alluvial fan deposits, and is described as consisting of weakly consolidated, slightly weathered, irregularly interbedded clay, silt, sand and gravel. The maximum thickness of these deposits is unknown, but is considered to be at least 150 feet thick.

Based on subsurface investigations performed at the site, the first 1.5 feet of the subsurface is composed of artificial fill. The fill is underlain by an unsaturated zone consisting of clay with minor amounts of sand and gravel, to a depth of approximately 18 feet below grade (fbg). The saturated zone, extending from approximately 18 to 30 fbg (limit of exploration), is composed of gravel with silt and sand, interbedded with clayey sand and clayey silt.

Monitoring and sampling of wells at the Site has been performed since September 1989. Depth to groundwater has varied from approximately 11 to 19 fbg. Groundwater flow direction was historically to the east in the early 1990s and currently has been predominantly towards the south and south-southeast with occasional deviations to the east-southeast and southwest. A rose diagram plot based on historical groundwater monitoring data is shown on Figure 3.

3.0 SITE BACKGROUND

July 1989: One 10,000-gallon and one 12,000-gallon gasoline underground storage tanks (USTs) were removed and replaced with two new 12,000-gallon USTs. One 550-gallon waste oil UST and associated piping for all three tanks were also removed. No holes or cracks were observed in the gasoline USTs; however, holes were observed in the waste oil UST.

Groundwater was encountered in the former UST pit at a depth of approximately 10.5 fbg, which prohibited the collection of soil samples below the former gasoline tanks. Confirmation soil samples from the sidewalls contained moderate maximum concentrations of total petroleum hydrocarbons as gasoline (TPH-g), and low maximum concentrations of benzene.

These sample areas were subsequently removed during over excavation. Soil samples from the base of the waste oil UST pit were non-detect for TPH-g and benzene, toluene, ethyl benzene, and xylenes (BTEX).

September 1989: Karpealian Engineering, Inc. (KEI) installed four groundwater monitoring wells at the site. The four wells were installed to depths of approximately 30 fbg.

November 1992: Two additional groundwater monitoring wells were installed offsite to a depth of 30 fbg.

September 1998: Two 12,000-gallon gasoline USTs and associated product piping and dispensers were removed from the site during station demolition activities. No holes or

cracks were observed in the tanks. Confirmation soil samples contained low maximum concentrations of TPH-g and benzene, and methyl tertiary butyl ether (MTBE) was not detected.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

March 27 and 28, 2006: TRC advanced three onsite and two offsite soil borings to a total depth each of between 20 and 24 fbg. Total Purgeable Petroleum Hydrocarbons (TPPH) , toluene, ethylbenzene, and total xylenes were detected in one onsite soil sample at 16 fbg at concentrations of 6,100 milligrams per kilogram (mg/kg), 53, mg/kg, 86, mg/kg, and 420 mg/kg, respectively. TPPH, benzene, and MTBE were detected at maximum concentrations of 13,000 micrograms per liter (µg/l), 510 µg/l, and 340 µg/l in onsite boring SB–3W. TPPH, benzene, and MTBE were detected in offsite boring SB-1W at concentrations of 120 µg/l, 11 µg/l, and 30 µg/l, respectively.

4.0 SITE ASSESSMENT ACTIVITIES

To evaluate the extent of dissolved-phase hydrocarbons in groundwater to the southeast of the site, in the vicinity of offsite boring SB-1, TRC proposes to install two offsite groundwater monitoring wells for the purpose of defining the extent of impacted groundwater to the south and southeast (Figure 2). The groundwater flow direction has been variable but predominantly to the southwest, south, and east.

4.1 Pre-Field Activities

Prior to commencing well installation activities, well installation permits will be acquired from the Alameda County Public Works Agency (ACPWA) and encroachment and excavation permits will be obtained from the City of Oakland for installation of the offsite monitoring wells.

Underground Service Alert (USA) will be notified at least two days prior to field activities to mark underground utilities at the property boundaries. In addition, a private utility locator will be contracted to confirm the absence of buried utilities at each proposed well location. Prior to drilling each boring, a pilot hole will be vacuum cleared with the use of an air knife to approximately 5 fbg to verify the absence of buried utilities.

A site and job specific health and safety plan that promotes personnel safety and preparedness during the planned activities has been developed and is included in Appendix B. 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 Monitoring Well Installations

Two offsite groundwater-monitoring wells (MW-7 and MW-8) will be installed to a depth of approximately 30 fbg using a hollow-stem auger drill rig. The proposed groundwater monitoring well locations are shown on Figure 2. The offsite monitoring wells will be installed south and southeast of the underground storage tanks to better characterize the extent of dissolved-phase hydrocarbons, specifically MTBE.

Soil samples will be collected from the two offsite monitoring well pilot borings at five-foot depth intervals using a split-spoon sampler. Samples will be collected for soil description in accordance with the Unified Soil Classification System (ASTM D-2487). In addition, the soil samples will be field screened using a hand-held photo-ionization detector (PID). Samples will be selected for laboratory analysis based on the PID screening levels and any observed hydrocarbon impact such as staining, liquid phase hydrocarbon (LPH) sheen, or hydrocarbon odor.

A minimum of two soil samples per pilot boring will be submitted to a state-certified laboratory for analysis, one of which will be collected from the capillary fringe above the water table. The selected soil samples will be properly preserved and transported to the laboratory under appropriate chain-of-custody protocol. The soil samples will be analyzed for TPH-g, BTEX, and fuel oxygenates, including MTBE by EPA Method 8260B.

The offsite monitoring wells will be constructed of 2-inch diameter riser and slotted PVC well screen from approximately 15-30 fbg. The exact well screen intervals for each well will be determined based on field observations of lithology and depth to first encountered groundwater during the exploratory borings. The screen formation annulus will be filled with an appropriate filter pack material. The riser formation annulus will be properly sealed with hydrated bentonite chips and cement grout. The wellhead will be sealed with a watertight, lockable well cap. A flush-mounted, watertight, traffic-rated well box will be installed over each wellhead.

After a minimum of 48 hours from the time of the well installation, the wells will be developed (surged and bailed) to improve hydraulic communication between the geologic formation and the well. A wellhead reference point, typically a notch cut into the top of the well casing, will be surveyed relative to the surrounding site wells and the nearest benchmark. Future depth to groundwater measurements will be made from the wellhead reference point.

4.3 Groundwater Monitoring and Sampling

Fluid level measurements and groundwater sampling will be conducted no sooner than 48 hours after development of the well. Fluid levels will be measured relative to the top of the casing with a precision of 0.01 feet. The presence and thickness of LPH will also be assessed in each well during groundwater monitoring and sampling.

Following fluid level gauging, the wells will be purged and sampled. A groundwater sample will be collected from the wells using a clean new disposable bailer. The groundwater samples will be appropriately preserved and submitted to a state-certified laboratory for analysis. Chain-of-Custody protocol will be followed, providing a continuous record of sample possession before actual analysis. The laboratory will analyze the groundwater samples for TPH-g, BTEX, and fuel oxygenates, including MTBE, by EPA Method 8260B.

4.4 Waste Disposal

Soil cuttings and purge water generated during well development and sampling activities will be 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.

4.5 Offsite Groundwater Investigation Report

Upon completion of the monitoring well installation activities, a final report will be prepared which will include boring logs, well construction details, laboratory analytical results, findings, and conclusions. The report will be submitted to the Alameda County Health Care Services Agency (ACHCSA) within six weeks of the completion of the field activities.

5.0 WORK SCHEDULE

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

- Agency approval of work plan expected within eight weeks of submittal.
- Conduct site assessment field activities within six weeks of agency approval of the work plan and approval of encroachment permits.
- Submit technical report within six weeks of completion of field activities and receipt of analytical data.

Sincerely,

for Rachelle Dunn
Senior Staff Geologist

Keith Woodburne P.G.
Senior Project Manager

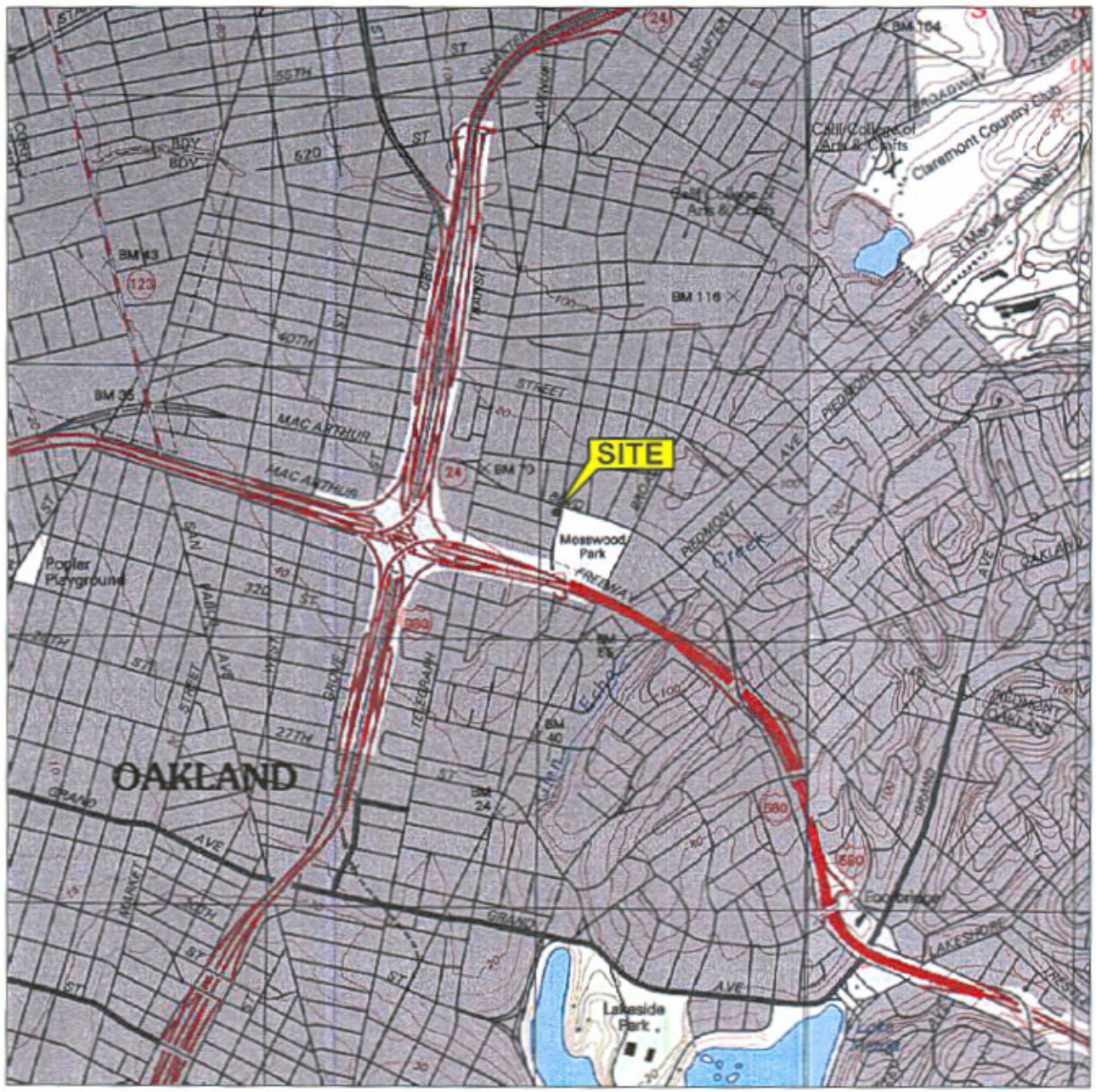
REGISTERED GEOLOGIST
KEITH L. WOODBURNE
No. 7607
exp 11/09
STATE OF CALIFORNIA

Attachments: Figure 1: Vicinity Map
Figure 2: Site Plan Showing Proposed Well Locations
Figure 3: Historical Groundwater Flow Directions
Appendix A: Site Health and Safety Plan

cc: Eric Hetrick, ConocoPhillips (electronic upload)

TRC

FIGURES



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

SCALE 1 : 24,000

N

SOURCE:

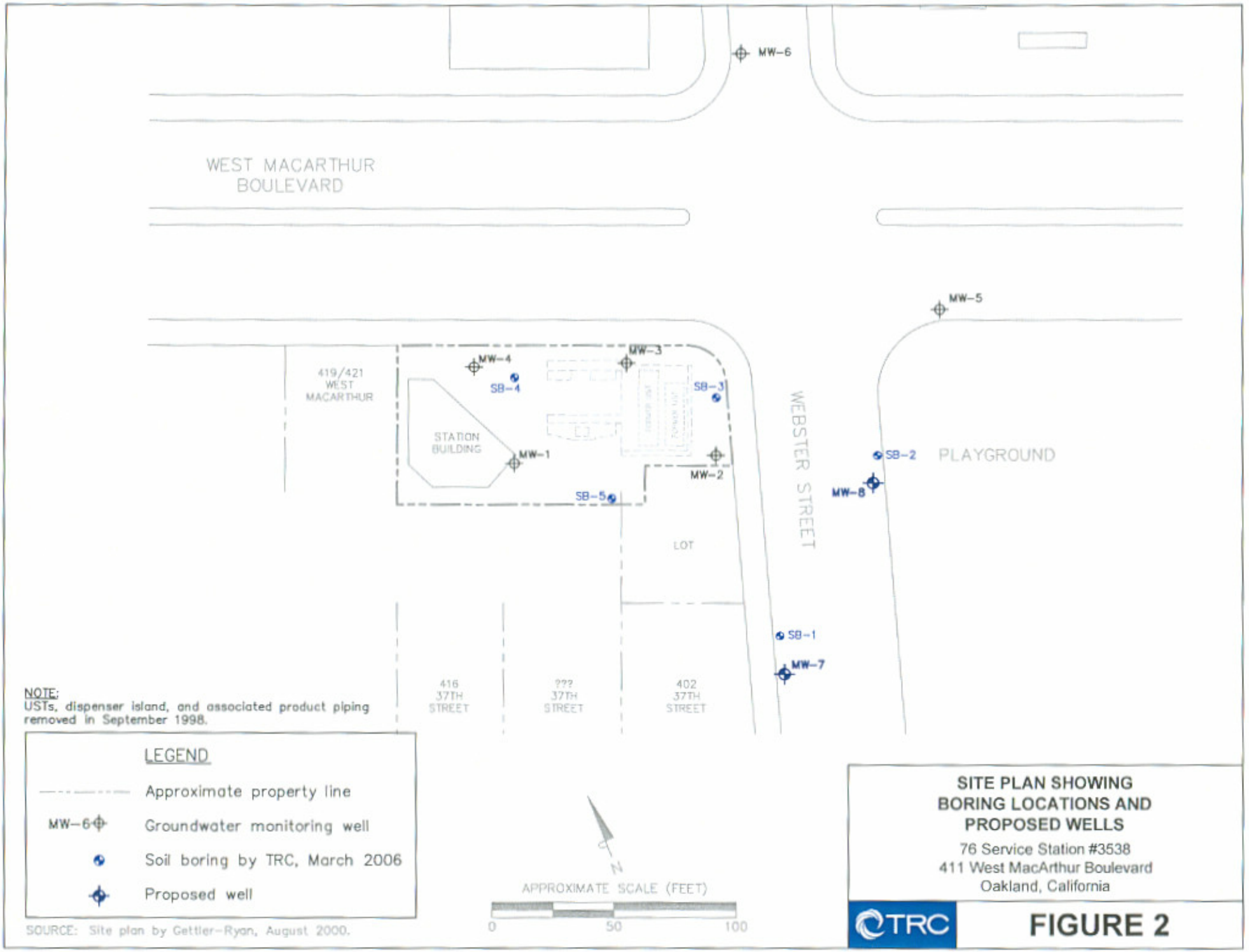
United States Geological Survey
7.5 Minute Topographic Maps:
Oakland East and Oakland West
Quadrangles, California

VICINITY MAP

76 Service Station #3538
411 West MacArthur Boulevard
Oakland, California

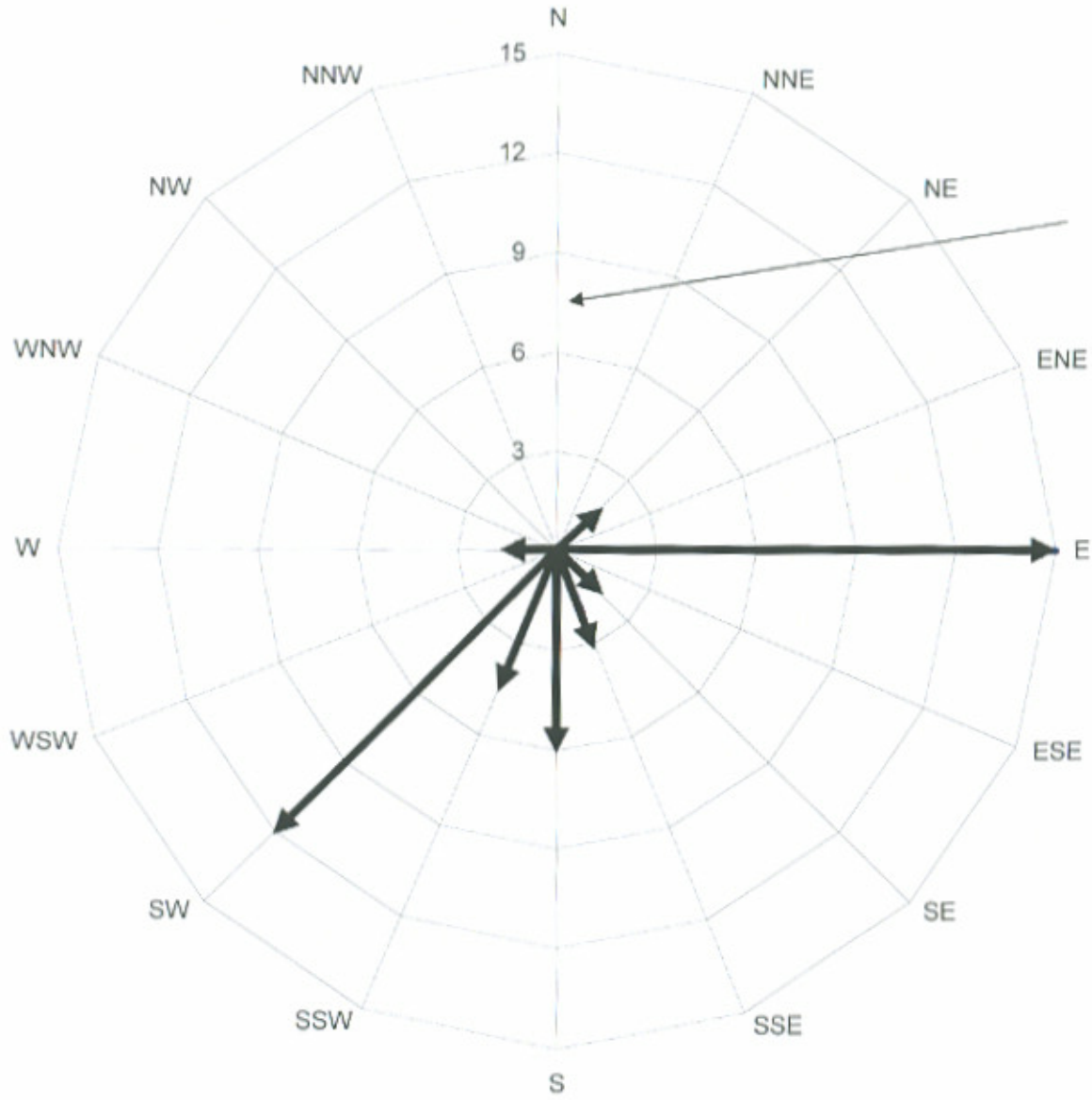
TRC

FIGURE 1


MW-6
WEST MACARTHUR BOULEVARD
MW-5
MW-4
MW-3
SB-4
SB-3
419/421 WEST MACARTHUR
STATION BUILDING
MW-1
MW-2
SB-2
PLAYGROUND
MW-8
SB-5
WEBSTER STREET
LOT
SB-1
MW-7
416 37TH STREET
??? 37TH STREET
402 37TH STREET
NOTE:
USTs, dispenser island, and associated product piping removed in September 1998.
LEGEND
Approximate property line
MW-6 Groundwater monitoring well
Soil boring by TRC, March 2006
Proposed well
N
APPROXIMATE SCALE (FEET)
0
50
100
SOURCE: Site plan by Gettler-Ryan, August 2000.
SITE PLAN SHOWING BORING LOCATIONS AND PROPOSED WELLS
76 Service Station #3538
411 West MacArthur Boulevard
Oakland, California
TRC
FIGURE 2

Historical Groundwater Flow Directions for Tosco (76) Service Station No. 3538

February 1990 through September 2006



TRC

APPENDIX A

SITE HEALTH AND SAFETY PLAN

SITE SPECIFIC HEALTH & SAFETY PLAN

76 Service Station #3538
411 West MacArthur Blvd
Oakland, California

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A	SITE PLAN
B	OCCUPATIONAL HEALTH GUIDELINES AND TOXICOLOGICAL INFORMATION
C	EMERGENCY SERVICES
D	LOCAL AREA MAP
E	JOB SAFETY ANALYSES (JSAs)
F	TAILGATE SAFETY MEETING CHECKLIST AND HASP COMPLIANCE AGREEMENT
G	CONTRACTOR SITE HEALTH AND SAFETY PLAN

SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP)

76 Service Station #3538
411 West MacArthur Blvd
Oakland, 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 76 Service Station #3538. This site-specific HASP is to be implemented in conjunction with TRC Solutions, Inc (TRC) 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:	ConocoPhillips
DESIGN ENGINEER:	TRC
CONTRACTOR:	TRC
SUBCONTRACTORS:	To Be Determined

The Subcontractor has also prepared a HASP for the drilling activities. Their HASP supplements TRC's HASP. A copy of their HASP is included in Attachment G. JSAs are included in Attachment E.

1.2 Scope of Work

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

- Installation of two offsite groundwater monitoring wells.
- Collection of soil and groundwater samples for analysis at a state-certified laboratory.
- Site clean up.

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):	The site is a former 76 Service Station located on the southwest corner of MacArthur Boulevard and Webster Street in Oakland. The site is currently a used car sales lot and is entirely fenced. All petroleum storage and dispensing equipment were removed in September of 1998 during station demolition activities.
Approximate depth to groundwater:	11 to 19 feet below grade
Contaminants of Concern (see Attachment B):	Gasoline, BTEX, and MTBE in soil and groundwater.

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: To Be Determined		
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:		
Western Region Safety Manager	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
☒ Pnuematic 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 are 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: The exclusion zone around the drill 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:

Interface probes are decontaminated after each use. Hoses are decontaminated on the outside if they are applied to a well with free product. The inside of the hose is decontaminated through the action of pumping out the water in the well after the free product has been removed. For hydrocarbon readings, the Horiba is left on and decontaminates itself between readings. When

testing a new well, the Horiba is left on for a period of time before readings are taken so that it equilibrates to the new well.

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 employees 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 - Outside the site, on the southwest corner of Webster and West Macarthur Boulevard.

Secondary assembly area - Northwest corner of Webster and West Macarthur Boulevard, across the street from the site.

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.

14.0 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.

15.0 HEALTH AND SAFETY PLAN (HASP) SIGNATURE PAGE

Job Safety Analysis Author	Date:	HASP Author	Date:
Monika Krupa		Monika Krupa	

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

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
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	n/a	500 (ACGIH)	n/a	Inhalation, Absorption, Ingestion, Contact	Yes	Irritation to eyes, skin, mucous membrane; dermatitis, headache, fatigue, blurred vision, dizziness, slurred speech, confusion, convulsions, aspiration
Benzene	0.5	0.1	1	1 (NIOSH)	500	Inhalation, Absorption, Ingestion, Contact	Yes	Irritation to eyes, skin, nose, resp system, giddiness, headache, nausea, staggered gait, fatigue, anorexia, weakness/exhaustion, dermatitis
Toluene	50	100	200	150 (NIOSH)	500	Inhalation, Absorption, Ingestion, Contact	No	Irritation to eyes, nose; fatigue, weakness, confusion, euphoria, dizziness, headache, dilated pupils, tears, nervousness, muscle fatigue, insomnia, dermatitis
Ethylbenzene	100	100	100	125 (NIOSH& ACGIH)	800	Inhalation, Ingestion, Contact	No	Irritation to eyes, skin, mucous membranes; headache, dermatitis, narcosis, coma
Xylenes (o,m,p)	100	100	100	150 (NIOSH & ACGIH)	900	Inhalation, Absorption, Ingestion, Contact	No	Irritation to eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait, nausea, vomiting, abdominal pain, dermatitis
Methyl tert butyl ether (MTBE)	40	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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):
Alta Bates Summit Medical Center ..... **(510) 869-6600**
350 Hawthorne Ave
Oakland, California

Directions:

1. Head **east** on **W MacArthur Blvd** toward **Webster St**	**115 ft**
2. Turn **right** at **Webster St**	**0.3 mi** 1 min
3. Turn **right** at **Hawthorne Ave**	**33 ft**

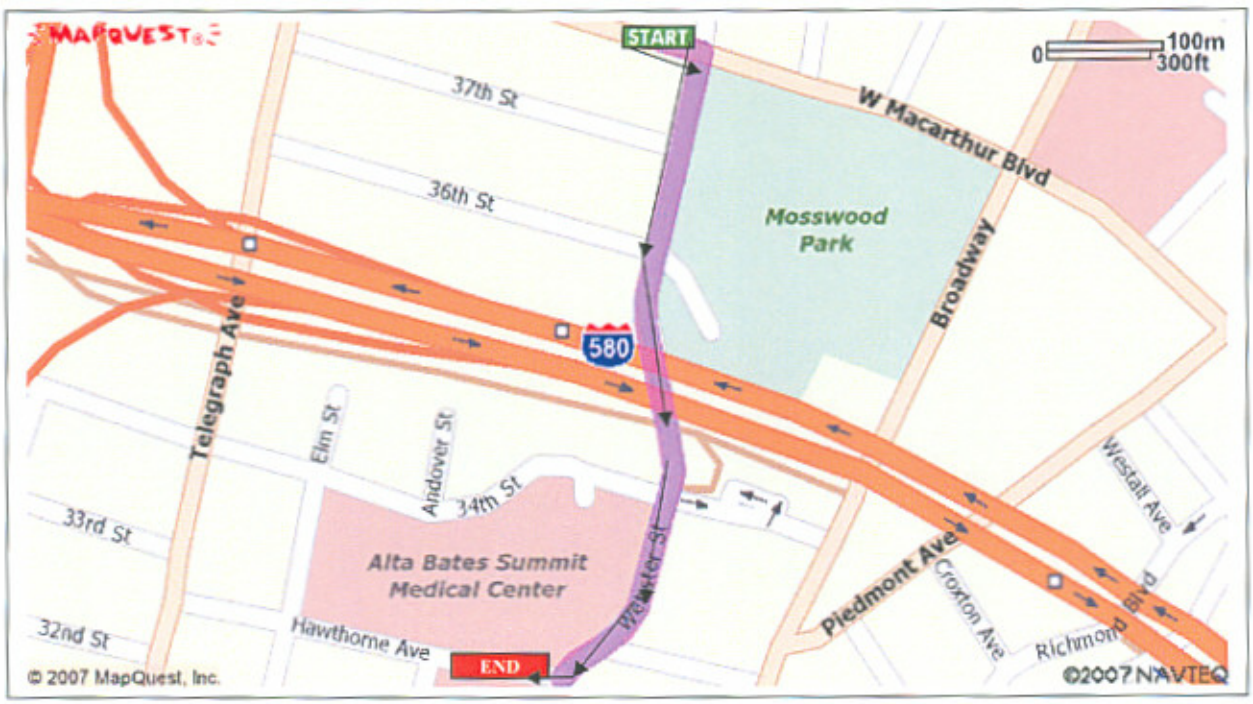
Poison Control Center: Emergency 24-Hour Hotline..... (800) 876-4766
California Poison Control System - San Francisco Division..... (415) 502-6000
at San Francisco General Hospital
University of California San Francisco
Box 1369
San Francisco, California 94143-1369

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

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

ATTACHMENT D

LOCAL AREA MAP
with routes to hospital



Directions:

1. Head **east** on **W MacArthur Blvd** toward **Webster St**	**115 ft**
2. Turn **right** at **Webster St**	**0.3 mi**
3. Turn **right** at **Hawthorne Ave**	1 min
	33 ft

ATTACHMENT E

JOB SAFETY ANALYSES

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 (Asst. SSO)

Print Name: _____ Date: _____

Contractor:

Signature: _____, Site Safety Officer (SSO)

Print Name: _____ Date: _____

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

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: _____