

Ro-004

THRIFTY OIL CO.

December 9, 2002

O.33841

Ms. Eva Chu
Hazardous Material Specialist
Alameda County
Health Care Agency
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA.

Alameda County
DEC 17 2002
Environmental Health

RE: Former Thrifty Oil Co. Station #049
3400 San Pablo Avenue 94609
Oakland, CA
Work Plan for Additional Site Assessment and Remedial System Upgrade

Dear Ms. Chu:

Thrifty Oil Co. (Thrifty) is in receipt of the Alameda County Health Care Agency's (ACHCA) letters dated August 9 and August 27, 2002 (**Appendix A**). In the ACHCA letters, a work plan for an additional site assessment for contaminant plume delineation and the upgrade of the existing remediation system was requested.

Additional Site Assessment

To delineate the contaminant plume, Thrifty proposes to install one off-site down-gradient groundwater monitoring well (MW-8) in 34th Street, as presented on **Figure 1**. The proposed well is approximately 40 feet down-gradient from monitoring well MW-4. The following activities will be associated with this task:

- Before monitoring well installation, well installation permits from the County of Alameda County Environmental Health Services, City of Oakland (if required), and any other agency that requires permits for street or sidewalk drilling will be obtained. USA notification will be performed, and a Health and Safety Plan will be prepared and submitted.
- A conduit and well survey will be conducted, as required by ACHCA.
- The well borehole will be drilled using a hollow-stem drilling rig, and soil samples will be collected at 5-foot intervals for laboratory analysis. Once groundwater is encountered, soil sampling will continue for geological logging purposes only, and the borehole will continue 15 feet into groundwater. Based on recent monitoring data, depth to water is approximately 7 to 10 feet below surface grade (bsg). Therefore, the total depth of the well is expected to be 25 feet bsg. The collected soil



samples will be placed on ice, and submitted to a state-certified laboratory under Chain-of-Custody conditions for analysis of total petroleum hydrocarbons as gasoline (TPH-g) by EPA method 8015M, benzene, toluene, ethylbenzene, xylenes (BTEX), and selected oxygenates (including MTBE) by EPA method 8260B.

- The soil boring will be converted into a 2-inch diameter monitoring well. The well will be screened from 25 feet bsg to 5 feet bsg, but could be altered depending upon the depth of encountered groundwater. Your office will be immediately notified by telephone of any alterations of the well design.
- Following well installation, the well will be developed using a drill rig-mounted surge block and bailer, purged and sampled. The collected water sample will be placed in an iced cooler, its ID number will be logged on a chain-of-custody, and the sample transferred to a state certified laboratory for analysis of TPH-g by EPA method 8015M, BTEX, and selected oxygenates including MTBE by EPA method 8260B.
- A licensed surveyor will survey all wellhead elevations to a known benchmark, following installation of the off-site well. The surveyor will comply with the new AB2866 requirements.
- Future quarterly monitoring reports will incorporate water table elevation and analytical data from the well.
- A report will be prepared to document the well installation activities, and will include copies of the well permits, boring logs, and sample analytical results. The report will also include geologic cross-sections depicting soil contamination, UST, piping and utility locations, groundwater elevation, lithology, and well screen intervals, as requested by the ACHCA.

Proposal to Upgrade the Existing Remediation System

The current system configuration is a down hole groundwater pump in a six inch groundwater recovery well (RW-1), which removes groundwater from the recovery well and pumps it into a holding tank located inside the remediation compound located on the east side of the station building (**Figure 2**). The water is then pumped from the holding tank through activated carbon and the treated water is then discharged to the sewer. There is an oil water separator and three carbon vessels in series. Five samples are collected before the water is discharged into the sewer. The samples collected are before the oil water separator (Inlet), after the oil water separator (Intermediate 3), after the first carbon (Intermediate 2), after the second carbon (Intermediate 1), and after the third carbon (Outlet) before discharging into the sewer.

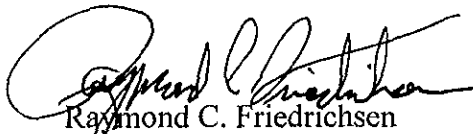
A product pump and product tank are also located in the compound, but are no longer being used since free product is not present at this site.

Thrifty requests to upgrade the existing system by:

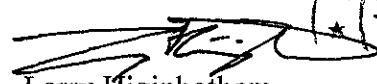
- Groundwater monitoring wells MW-4 and RW-1 will be properly developed, to enhance groundwater recovery from these wells. The wells will be developed using a well development rig by alternately using a surge block and bailing.
- New conveyance piping and water conveyance hoses will be installed to well MW-4, in a trench that will be excavated between RW-1 and MW-4. One new pneumatic pump will be installed into well MW-4 while the existing pump will be used in well RW-1. Following the piping installation to MW-4, the trenching will be backfilled, compacted, and resurfaced to existing grade. All system components will be tested to see if it is necessary to replace the existing pump or water conveyance hoses connecting RW-1 to the system compound.
- Since free product does not exist at this site any longer, Thrifty will remove the product tank and the oil water separator from the site, and it will not be included in the system upgrade schematic.
- The proposed upgraded remediation system will consist of two down hole automatic air-powered pumps (pneumatic) installed within wells MW-4 and RW-1, a 250 to 500-gallon holding tank, and a transfer pump. Water will be pumped from the two recovery wells into the holding tank, and then be pumped by the transfer pump to the first of three 250 pound activated carbons canisters in series. When the water exits the third carbon canister, the treated water will be discharged to the sewer. As with the current groundwater system, samples will be collected at selected ports before the water is discharged to the sewer to ensure water quality standards are met.


Once this work plan has been approved by the ACHCA, Thrifty will submit proposal request to several contractors. Upon reviewing the contractor bids, a contractor will be selected and retained by Thrifty to perform the above scope of work.


Written by:


 Raymond C. Friedrichsen
 Project Manager
 Senior Environmental Hydrogeologist

Reviewed by:

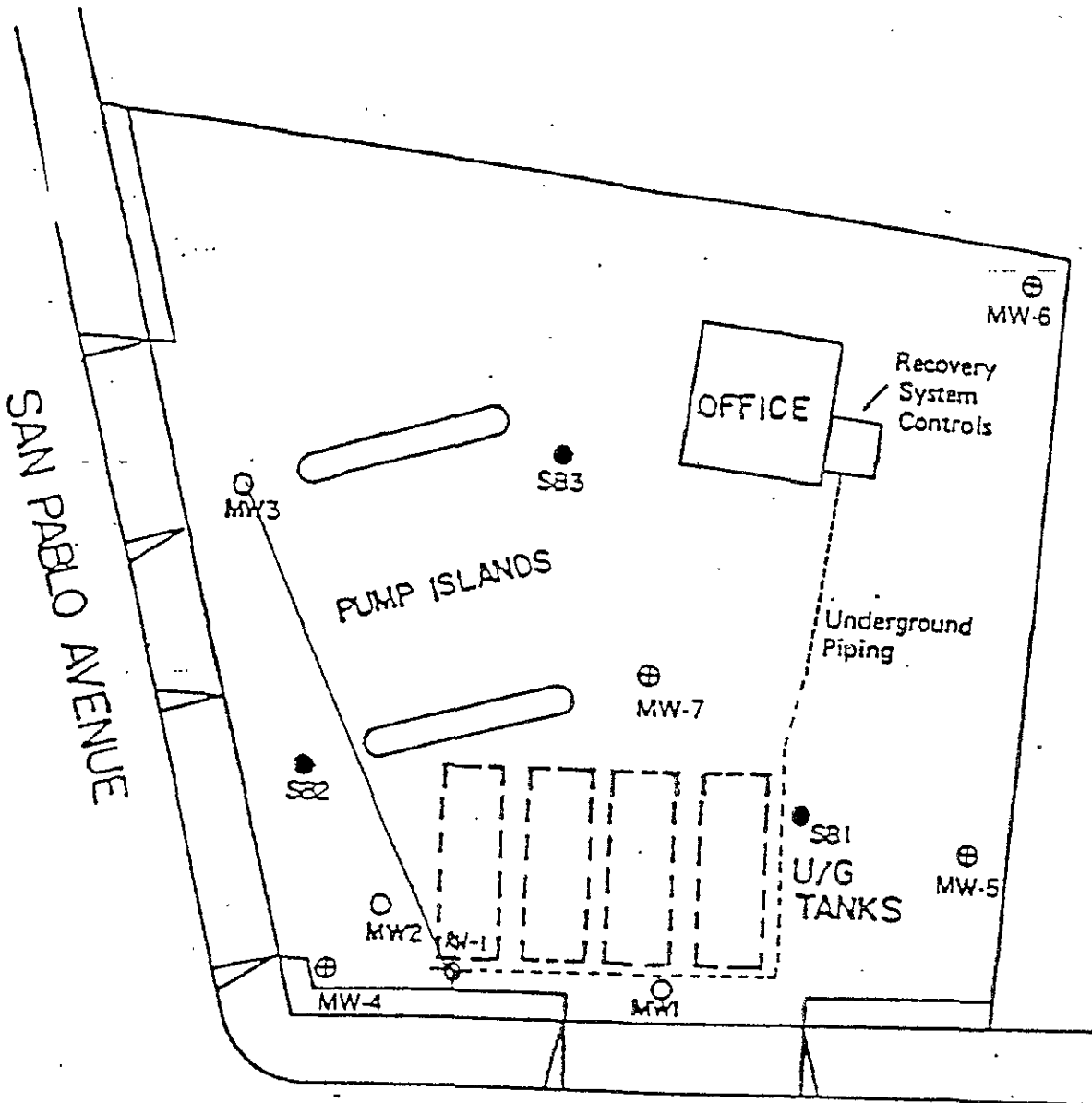

 Larry Higinbotham
 Registered Geologist #5497




 Chris Panaitescu
 General Manager
 Environmental Affairs

C: BP West Coast Products, LLP, Attn: Ms. Kateri Luka
 File

FIGURES

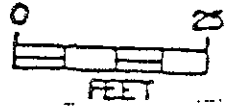


34th STREET

LEGEND

- MW1 - GT MONITORING WELLS
- ⊕ MW-4 - WCC MONITORING WELLS
- SB1 - GT SOIL BORINGS
- ⊙ RW-1 - G.W. RECOVERY WELL
- ⊗ Proposed off site well

⊗ MW-8



SITE PLAN AND RECOVERY SYSTEM LOCATION.
 ----- THRIFTY SERVICE STATION NO. 49
 3400 SAN PABLO AVE.
 OAKLAND, CA

Figure 1

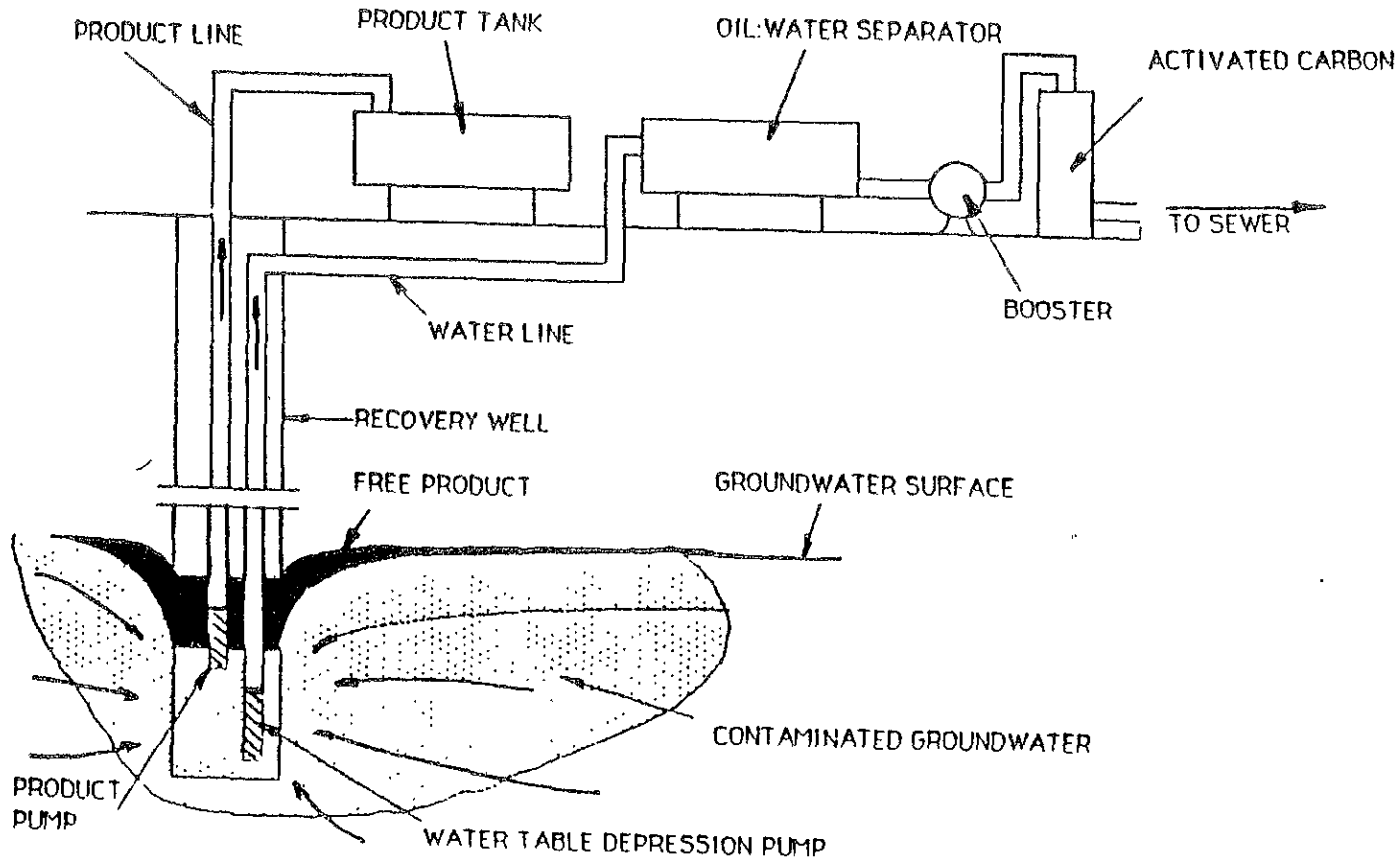


Figure 2 CONCEPTUAL RECOVERY SYSTEM SCHEMATIC

APPENDIX A

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



RECEIVED AUG 15 2002

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RO0000004

August 9, 2002

Mr. Chris Panaitescu
Thrifty Oil Co.
13116 Imperial Highway
Santa Fe Springs, CA 90670-0138

1-200218
RECEIVED

AUG 20 2002

ENVIRONMENTAL
TOL#049

RE: Additional Investigations at 3400 San Pablo Avenue, Oakland, CA

Dear Mr. Panaitescu:


File
RF
JZ

I have completed review of the case file for the above referenced site. Soil and groundwater samples collected at the site have confirmed the release of fuel hydrocarbons that has impacted both soil and groundwater. Since 1991, over one million gallons of groundwater was pumped, treated and discharged to the sanitary sewer. Approximately 1,100 tons of hydrocarbon-impacted soil was excavated and disposed. Currently, up to 36,500ug/l TPHg and 24,000ug/l MtBE is detected in groundwater monitoring well MW-4.

At this time additional investigations are required to better characterize the contaminant plume. A conduit and well survey and a minimum of one offsite monitoring well is required. In addition, geologic cross-sections depicting, at a minimum, residual soil contamination, UST, piping and utility locations, groundwater elevation, lithology, wells and their respective screen interval are required. Lastly, Thrifty's proposal to connect well MW-4 to the existing remediation system is acceptable.

A workplan for the delineation of the contaminant plume is due with 60 days of the date of this letter, **or by October 14, 2002.**

If you have any questions, I can be reached at (510) 567-6762.


eva chu
Hazardous Materials Specialist

OK TO PUT WORKPLAN in Quarterly
Report. 10/16/02, Due by Dec 31, 2002.