

SCS ENGINEERS

September 24, 1991
File No. 0390044.02

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Mr. Paul M. Smith
Hazardous Material Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Subject: Letter dated September 3, 1991
Revised Modification Work Plan Proposal for
1432 Harrison Street and adjoining Alice Street Garages

Dear Mr. Smith:

SCS Engineers (SCS has reviewed the comments of your September 3, 1991 letter, and submits the following which are enumerated seriatim:

1) Chlorinated hydrocarbon solvents were reported in the laboratory analysis of samples that SCS collected on August 14, 1991, not July 10, 1991. All of the samples including dichloroethene, chlorobenzene and trichlorethene were at low concentrations, i.e., less than one part per million (ppm). These levels are well below the permissible exposure limit (PEL) and will not present a health risk during tank removal.

Furthermore, these samples were taken from vessels that were contained and not open to the atmosphere. Therefore, there is little opportunity for these materials to escape into the atmosphere. During the removal of the tanks and piping, these items will be triple-rinsed, and the rinsate evacuated by a vacuum truck, which will prevent vapors from escaping to the air. The tanks and vessels will be checked with a lower

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explosive limit (LEL) detector, and dry ice will be added to obtain an inert atmosphere within the containers.

The data submitted by others dated October 19, 1990 is of questionable reliability. First, the Chromalab report of October 19, 1990 indicates 130,000 and 140,000 ppm of benzene in the two gasoline tanks. These two tanks were resampled and the results indicated a benzene concentration of 1.8 percent, which is a normal percentage for gasoline. Second, the October 19, 1990 Chromalab report for sample LB-PP-D (oil) indicates a detection limit of 75 ppm, but reports TCE at 60 ppm. The same sheet reports PCE at 94 ppm. The reporting of TCE below the detection limit raises questions about both the PCE and TCE data. The twelve samples taken by SCS on August 14, 1991 indicated lower levels, with 40 ppb of PCE and 190 ppb of TCE being the highest reported.

With regard to the chlorinated hydrocarbons of methylene chloride, chlorobenzene and tetrachlorethane, all the data from Chromalab and SCS indicates levels well below 1 ppm. Again, these compounds will be contained in vessels and therefore have little chance for escape to the atmosphere, due to the purging and rinsing procedures normally associated with underground storage tanks.

Based upon discussions with several air monitoring technicians, SCS plans to use a photo ionization detector (PID) which is a very sensitive instrument, or an h-nu, to ascertain airborne contamination. The best approach is to select a material which has a relatively high volatility, low permissible exposure limit (PEL) which could be

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an indicator. SCS will select benzene which has PEL of 1 ppm, versus 25, 50, 75, or 500 PEL for halogenated hydrocarbons which have been identified. The PID will be on site at all times when work is being conducted.

A review of the OSHA permissible exposure limits (PEL) for the chlorinated hydrocarbons either identified or suspected are as follows in parts per million (ppm).

	<u>PEL</u>	<u>Short Term Exposure Limit</u>
Chlorobenzene	75 ppm	-
o-Dichlorobenzene	50 ppm	-
p-Dichlorobenzene	75 ppm	110 ppm
Methylene Chloride	500 ppm	1000 ppm
Tetrachloroethene	25 ppm	-
Trichloroethene	50 ppm	200 ppm

← The PEL for benzene is 1 ppm and the short term exposure limit is 5 ppm.

Monitoring logs will be maintained.

The selectivity scale will be the lower scale, so that anything above background plus 5 ppm airborne, benzene will be detected.

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In order to detect each of the substances which have been previously analyzed on this site, there would have to be a battery of 8- to 10 instruments. This would be impossible to monitor and is uncontrollable. The PID set for benzene should satisfy all Health and Safety requirements with respect to not only the halogenated solvents, but the benzene which SCS believes would be the most likely airborne contaminant in this work place. Respirators will be available for all personnel working in the immediate area.

If in fact during the excavation of the tanks, a level of benzene or other contamination indicated above the limit set, which could cause harm to personnel on the work site, the entire operation will cease. The excavation will be covered with visqueen and secured to hold possible airborne contamination in-place, and a contingency program to reduce the airborne contamination will be devised at that time depending on the concentration and type of contaminant.

2) The Project Manager is authorized to act as the Site Safety Officer. In most cases that will be the Project Director, John P. Cummings, but in other cases Nels Johnson, the Project Manager and Senior Engineer is also capable of acting as a Site Safety Officer. So therefore, we have an alternate Site Safety Officer in case the primary Site Safety Officer is not available.

As noted earlier, in the event that the levels of airborne contamination exceed permissible exposure level (PEL) amounts, the work will be stopped on the site, the material which was being excavated will be covered with visqueen and secured to stop

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any airborne releases. A procedure will be set up to evacuate the contaminant beneath the barrier in order to make certain that contaminants are not allowed to escape into the air.

With respect to the parking garage operations, the parking garage will operate normally during the period when the waste oil tanks and ancillary piping are being removed in the basement of the Alice Street side. The garage operator does not plan to utilize the basement or lower areas for parking and therefore there will be no exposure to the personnel working in the garage, that is the attendant, or to people parking in the upper levels. During the removal of the tanks on the Harrison Street side along with the hydraulic lifts, the entrance will be closed on the Harrison Street side, and ingress and egress to the garage will be on the Alice Street side, thus avoiding any direct contact between the work place and people utilizing the garage. The duration of this work is estimated at 2 to 3 days.

3) The revised work plan is changed so that four discreet samples will be taken every 50 cu yd and the samples will be composited in the laboratory. The stockpiled soil from the oil tank removal will be stockpiled in the basement, the soil from the gasoline tank excavation and ancillary pumps will be placed in the Harrison Street side of the garage and covered with visqueen.

4) SCS has removed many hydraulic lifts and understands that SCS has to reach the native soil beneath the hydraulic lift rams, therefore whatever sluffing soil has fallen into the hole will be removed by backhoe prior to samples being taken.

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5) SCS as a matter of policy always labels each drum with a sample number identifying the drum and where the tailings came from. This is also true with purge water recovered from the wells. These drums will also be identified at the time the well was purged, and sample numbers conforming with the drum will be used to identify the contents for analysis if required.

6) The laboratory state certification for SCS Laboratories in Long Beach is E755.

7) The higher detection limits as required by the Tri Regional Board Recommendations shall be utilized and have been placed in the forms for the UST Closure Plan.

These changes shall be incorporated into the modified work plan dated August 19, 1991, provided they answer the deficiencies you noted.

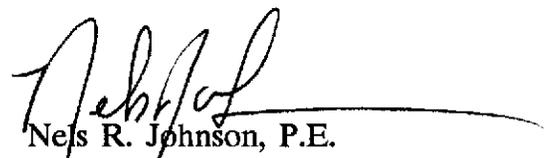
A check for \$1,000 payable to Alameda County for cost of review and administration per your request will be sent under separate cover.

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Should you have any questions, please call either of the undersigned at (510) 829-0661.

Sincerely,


John P. Cummings, Ph.D., R.E.A., R.E.P.
Office Director
SCS Engineers


Neils R. Johnson, P.E.
Senior Project Engineer
SCS Engineers

JPC:egh
Enclosures

cc: R. Morrison
M. Borsuk
A. Bacharach
B. Borsuk

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated)	Sampling Plan
Unknown	See Modified Work Plan

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Gasoline Tanks

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
TPH Gasoline		EPA 8015 G	Soil/Water 1 ppm/0.05 ppm
TPH Diesel		EPA 8015 D	1 ppm/0.05 ppm
BTEX		EPA 8020	.005 ppm/.0005 ppm
Oil and Grease		413.1	50 ppm/5 ppm
Total Lead		AA spectroscopy	0.2 ppm/5 ppb

17. Submit Site Health and Safety Plan (See Instructions)

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated)	Sampling Plan
Unknown	See Modified Work Plan

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Waste Oil Tanks

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
TPH Diesel		EPA 8015D	<u>Soil/Water</u> 1 ppm/ .05 ppm
TPH Gasoline		EPA 8015G	1 ppm/ .05 ppm
BTEX		EPA 8020	5 ppb/ .5 ppb
Total Lead		AA Spectroscopy	0.2 ppm/5 ppb
Oil and Grease		413.1	50 ppm/5 ppm

17. Submit Site Health and Safety Plan (See Instructions)

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated)	Sampling Plan
Unknown	See Modified Work Plan

Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Hydraulic Lifts

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
TPH Diesel		EPA 8015 D	Soil/Water 1 ppm/0.05 ppm
BTEX		EPA 8020	.005ppm/ .0005ppm
Oil and Grease		413.1	50 ppm/5 ppm

17. Submit Site Health and Safety Plan (See Instructions)