

Forty-fifth Ave SW Apartments  
Seattle  
VCP NW 2809  
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# GEOTECH CONSULTANTS

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DEPT OF ECOLOGY  
TCP-NWRO

September 5, 1989

JN 88199

Department of Construction and Land Use  
600 4th Avenue  
Seattle, Washington 98104

Attention: Ms. Faith Lumsden  
Land Use Specialist

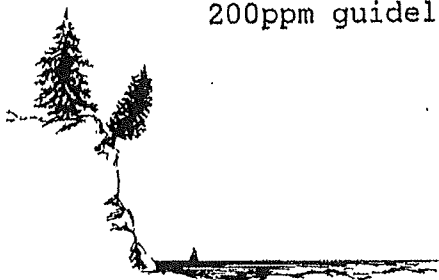
Subject: Removal of Underground Storage Tanks  
14 - Unit Apartment Building  
9212 45th Avenue S.W.  
Permit No. 645073  
Seattle, Washington

Dear Ms. Lumsden:

We are submitting this letter in response to your request for documentation in regard to the removal of underground storage tanks at the subject site. It is our understanding that all work has been stopped at the site by the Department of Construction and Land Use (DCLU). The purpose of this letter and the attached laboratory results is to provide you with acceptable documentation of the chemical testing related to the removed tanks, and the actions taken to remediate any soil contaminated at concentrations above the current Washington State Department of Ecology (WDOE) guidelines for underground storage tank removal.

A total of six underground storage tanks were encountered and removed over a period of about two months during construction activities at the site. The following actions were taken to remove the tanks and remediate any contaminated soil:

- \* Two oil storage tanks were removed from the northern portion of the site. Table A presents the results of the analyses performed on soil samples taken from the sidewalls and bottom of the tank excavations. As the results suggest, soil around the western-most tank contained total petroleum hydrocarbons (TPH) at concentrations above the current WDOE standard of 200 parts per million (ppm). As noted in Table A, the residual concentrations of petroleum hydrocarbons in the soil near the eastern-most tank of this group were well below the 200ppm guideline.



- \* In order to comply with the current WDOE guidelines, approximately five cubic yards of contaminated soil was removed from the western-most tank excavation and disposed of at the Cedar Hills landfill. As indicated by the results in Table B, the concentrations of petroleum hydrocarbons remaining in the excavation following removal of the contaminated soil were well below the 200ppm guideline.
- \* Two gasoline storage tanks were excavated and removed from the western portion of the subject site. The results of the analyses conducted in association with removal of these tanks are presented in Table C and illustrate that the benzene, toluene, ethylbenzene, and total xylene (BTEX) levels were below the current WDOE guidelines for these compounds.
- \* Two additional gasoline storage tanks were removed from the southern portion of the site. The results of the analyses conducted in association with these tanks are presented in Table D. These results also illustrate that the BTEX concentrations were below those prescribed by the WDOE.

Based on the information developed thus far, it is our professional opinion that following the excavation and removal of the six tanks, and the soil remediation documented in this letter, conditions of the remaining soil in the vicinity of the removed tanks are compliant with prevailing guidelines of the WDOE. We trust that this letter and the attached laboratory results present adequate documentation so that the stop work order may be lifted from construction activities at the subject site.

#### Limitations

This letter has been prepared for specific application to this project in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. This letter is for the exclusive use of Seattle Department of Construction and Land Use, Washington Department of Ecology, General Pacific Construction, and their representatives. No other warranty, either expressed or implied, is made. If new information is developed in future site work which may include

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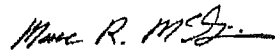
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excavations, borings, studies, etc., Geotech Consultants, Inc. should be allowed to reevaluate the conclusions of this letter and to provide amendments as required.

If you have any questions regarding this letter please do not hesitate to contact us.

Respectfully submitted,

GEOTECH CONSULTANTS, INC.



Marc R. McGinnis  
Environmental Engineer

cc: Joe Hickey, Washington State Department of Ecology

Attachments

TABLE A

Sample Location	Total Petroleum Hydrocarbons (ppm)
Western-most Tank (Oil)	
-Bottom of excavation	1,150
-West wall of excavation	890
Eastern-most Tank (Oil)	
-Bottom of excavation	<5
-South wall of excavation	94

## NOTES:

- (1) Analytical Methodology: EPA Method 418.1
- (2) 200ppm maximum allowable under current WDOE guidelines

TABLE B

Sample Location	Total Petroleum Hydrocarbons (ppm)
Western-most Tank (Oil)	
-Bottom of excavation following removal of contaminated soil	<5

## NOTES:

- (1) Analytical Methodology: EPA Method 418.1
- (2) 200ppm maximum allowable under current WDOE guidelines

TABLE C

Sample Location	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylene (ppb)
Fill soil above tanks	<1	100	1,300	12,900
Soil between the ends of the tanks	<1	<50	40	2,800
East wall of the excavation	<1	<1	<1	<1
Excavated soil	<1	<1	<1	<1

## NOTES:

- (1) Analytical Methodology: EPA Method 8020
- (2) Maximum concentrations in soil per current WDOE guidelines:  
 benzene - 660 parts per billion (ppb)  
 toluene - 143,000ppb  
 ethylbenzene - 14,000ppb  
 no current guidelines for total xylene

TABLE D

Sample Location	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylene (ppb)
Eastern-most Tank (bottom of tank excavation)	<1	<1	<1	<1
Western-most Tank (bottom of tank excavation) of excavation	<1	<1	<1	6

## NOTES:

- (1) Analytical Methodology: EPA Method 8020
- (2) Maximum concentrations in soil per current WDOE guidelines:  
 benzene - 660ppb  
 toluene - 143,000ppb  
 ethylbenzene - 14,000ppb  
 no current guidelines for total xylene