

January 3, 1990

Mr. Dick Godfrey, Region Engineer
BOISE-CASCADE, Inc.
North Seventh and East H Streets
Yakima, WA 98901

Re: Underground Tank Removal
Boise Cascade, Yakima, WA

Dear Mr. Godfrey:

A geotechnical engineer, a geologist, and an engineering technician from our office monitored removal of the following steel, underground, petroleum product storage tanks at the Boise Cascade Mill located at North Seventh and East H Streets, Yakima, Washington:

TANK NO.	SIZE (gal)	PRODUCT
1	20,000	diesel
2	10,000	gasoline
3	10,000	diesel
4	10,000	diesel

Please see the attached location sketch, Figure 1.

Field testing for volatile organics using a Photovac TIP 1 ultraviolet analyzer was performed as soil was removed from each tank basin excavation. Initially, volatile organics were detected. Excavation continued until the TIP no longer detected a significant amount of volatile organics. The excavations extended below the bottom of Tanks No. 1 and 2 basins to approximately 12 feet below the surface and to approximately 17 feet below the surface for Tanks No. 3 and 4.

Tanks No. 1 and 2 were located in an alluvial stratum of cobbles, gravel, and sand. The water table was not encountered in these excavations. Tanks No. 3 and 4 were located in a conglomerate of unsorted rocks intermixed with tree bark chips. Water was encountered approximately 15 feet below the surface.

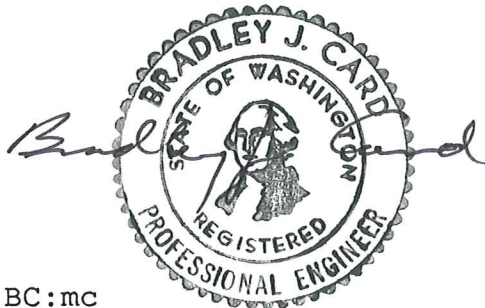
Mr. Dick Godfrey, Region Engineer
BOISE-CASCADE, Inc.
January 3, 1990
page 2

Soil samples were collected from the bottom of the excavations for Tanks No. 1, 3, and 4. Water samples were collected from the bottom of the excavations for Tanks No. 3 and 4. These soil and water samples were submitted to a laboratory for analysis for Total Petroleum Hydrocarbons, EPA Method 8015. The enclosed test results show that, within limits of the excavation, there were no total petroleum hydrocarbons found within the detection limits of the test procedure, 10 mg/kg. Soil samples collected from the bottom of the gasoline tank excavation and laboratory tested for benzene, toluene, ethylene, and xylene (BTEX) were also below detection limits, 0.05 mg/kg.

Therefore, there was no unacceptable level of residual diesel or gasoline found after the contaminated soil had been removed. This is consistent with the Washington State Department of Ecology (WDOE) August 1, 1988 draft clean-up guidelines for underground diesel storage tanks.

The contaminated soil excavated from around the tanks has been stockpiled on polyethylene sheeting on the premises for later disposal at an approved facility or decontamination at the site. Excavations were backfilled with clean soil.

Please let me know if you have any questions. Meanwhile, thank you for allowing us to have been of service.



Sincerely,

A handwritten signature in cursive script that reads "Brad Card".

BRAD CARD, P.E.
Principal Engineer

BC:mc
Enclosure
cc: Ken Leingang Excavating
Dave George, WDOE

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: December 28, 1989

Report On: Analysis of Soil & Water

Lab No.: 9035

IDENTIFICATION:

Samples Received on 12-21-89

Project: 89217 Boise C. Yak.

ANALYSIS:

<u>Lab Sample Number</u>	<u>Client Identification</u>	<u>Total Petroleum Fuel Hydrocarbons, ppm by EPA SW-846 Modified Method 8015</u>
1	Tank #1 1S (Soil)	<10
2	Tank #1 1N (Soil)	<10
3	Tank #3 3S (Water)	<10
4	Tank #3 3SW (Soil)	<10
5	Tank #3 3E (Soil)	<10
6	Tank #3 3N (Soil)	<10
7	Tank #4 4W3 (Water)	<10
8	Tank #4 4W2 (Soil)	<10
9	Tank #4 4E2 (Soil)	<10

SOUND ANALYTICAL SERVICES


C. LARRY ZURAW

-2-

CLIENT: PLSA Engineering &
Surveying
REPORT TO: Brad Card

DATE RECEIVED: 12/14/89

DATE REPORTED: 12/28/89

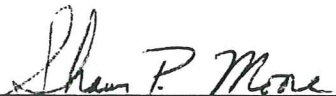
BTEX By EPA Method 8020

Laboratory Sample Number	Blank	923194	923195	Detection Limit (ug/kg)
Client Identification	-	2E	2W	
Benzene	ND	ND	ND	5.
Toluene	ND	ND	ND	5.
m+p-Xylene	ND	ND	ND	5.
o-Xylene	ND	ND	ND	5.
Ethylbenzene	ND	ND	ND	5.

ND = Not Detected
Values in ug/kg.

SPM/ja

REPORTED BY:


Shawn P. Moore