Bergeson-Boese & Associates, Inc.

Hydro-Geotechnical Research

2560 Frontier Drive
Eugene, Oregon 97401

(503) 484-9484
Fax (503) 484-4188

October 15, 1991

Mr. Bart Collingsworth
Department of Environmental Quality
Willamette Valley Region
750 Front Street NE, Suite 120
Salem, Oregon 97310

RECEIVED
OCT 22 1991
STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALEM, OREGON

RE: Status of Investigation at Former Service Station
4010 Donald Street, Eugene, Oregon

Dear Mr. Collingsworth:

This letter recounts the activities performed to date at the former service station at 4010 Donald Street in Eugene, Oregon, and presents the current status of the investigation. The following briefly summarizes the history of the investigation:

1. In October 1981, four Underground Storage Tanks (USTs) located at the subject property were decommissioned in place by filling with pea gravel.

2. In March of 1991, Bergeson-Boese & Associates (BB&A) was retained to conduct an environmental investigation at the subject property. Laboratory analysis of a water sample collected from the tank pit indicated that groundwater had been impacted by volatile aromatic hydrocarbons (BTEX). On March 27, 1991, BB&A, on behalf of the responsible party, notified the DEQ of a confirmed release in accordance with OAR-340-122-220.

3. Four underground storage tanks (USTs) were excavated and removed from the site during the period of April 24 & 25, 1991. Initial cleanup activities removed all of the unconsolidated materials from the excavation. Groundwater was purged from the tank pit and a water sample was collected for analysis of volatile aromatic hydrocarbons (BTEX). Benzene was detected at 1.4 ug/L (ppb).

4. An additional sample was collected and analyzed for BTEX on July 11, 1991, in order to confirm the low level of benzene. Benzene was detected at 1.3 ug/L (ppb). However laboratory personnel reported that there was evidence of the presence of halogenated volatile organic compounds. These could not be positively identified or quantified by the method used to analyze for BTEX. Results of this analysis is included with this letter.

5. The observation well was sampled again on July 12, 1991, and the groundwater was analyzed for halogenated volatile organic compounds using EPA Method 8240. The results of this analysis indicated the presence of tetrachloroethene (45 ug/L). trichloroethene (200 ug/L), and cis-1,2-dichloroethene (150 ug/L). The results of this

sample event are included with this letter. The Department was notified of these results by telephone. Since the detected compounds are commonly associated with dry cleaning operations, a neighboring dry cleaner was identified as a potential source.

6. BB&A conducted a review of current operating conditions at the neighboring dry cleaner, including a review of MSDS on file. The MSDS on file indicate the use of tetrachloroethene at the cleaners. A sample of the steam condensate that discharges from the operation was collected and analyzed using EPA Method 8240. No detectable levels of halogenated volatile organic compounds were present. The laboratory reports for this analysis are also included with this letter.

Currently the source of the halogenated solvents detected in the groundwater at the UST excavation has not been identified. Further historical review of the subject property indicates the possible presence of an abandoned waste oil tank and catch basin under the foundation of the building presently occupying the site. These areas are considered to have a significant probability as potential sources of the contamination.

It is recommended that further investigation of potential sources of contamination be performed and that any identified sources be mitigated. Monitoring of the existing observation well after the performance of any remedial measures may indicate restoration of the groundwater quality. If, however, the contaminant levels remain elevated, the extent and severity of the groundwater contamination will require full characterization.

If you have any questions regarding information presented in this letter, do not hesitate to contact me.

Sincerely,

Bergeson-Boese & Associates, Inc.

Stephen Lawn
Environmental Consultant

cc: R. McCool

Pacific Northwest Laboratories

Environmental Analysis

2560 Frontier Drive
Eugene, Oregon 97401

(503) 484-4493
Fax (503) 484-4188

July 16, 1991

Richard McCool
1504 Barber Dr.
Eugene, Oregon 97405

RE: PNL Report Number: 1058
Client Project No.: DON-01-01

Please find enclosed the laboratory report prepared for the analytical testing you requested.

The samples were received under a chain of custody and in containers consistent with EPA protocol.

No project specific Quality Control (QC) was requested for the analysis performed. However, documentation of standard in-house QC procedures performed by Pacific Northwest Laboratories is available upon request.

To request additional sample containers and coolers, please contact us at the above address or phone number.

Thank you for selecting Pacific Northwest Laboratories for your analytical testing needs. We look forward to serving you again.

Sincerely,

Pacific Northwest Laboratories

Craig Biersdorff

Craig Biersdorff, Laboratory Director

Enclosure

Pacific Northwest Laboratories
2560 Frontier Drive
Eugene, Oregon 97401
(503) 484-4493 FAX 484-4188

LABORATORY REPORT

PNL REPORT NUMBER: 1058

CLIENT: Richard McCool
CLIENT PROJECT NUMBER: DON-01-01
SITE LOCATION: 40TH Ave. & Donald St.; Eugene, Oregon

P.O. NUMBER: 5664
ITEMS ANALYZED: 1 water

DATE SAMPLES COLLECTED: July 11, 1991
DATE SAMPLES ANALYZED: July 12, 1991
DATE SAMPLES DISCARDED: July 25, 1991

METHOD: BTEX per EPA 602
Results and Detection Limit presented in µg/L (ppb)
ND = Compound not detected

SAMPLE I.D.	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
DON-01-OB	1.3	ND	ND	ND
Detection Limit	1.0	1.0	1.0	1.0

Bergeson-Boese & Associates

Hydro-Geotechnical Research
2560 Frontier Drive
Eugene, Oregon 97401

* Results by 7/15/91 *

CHAIN OF CUS

COMPANY BB&A
PROJECT MANAGER Kendra Boese
COLLECTED BY KB T

PROJECT NAME 40th & Donald
PROJECT NUMBER DON-01-01
P.O. NUMBER 5664

LAB PROJECT NO. 1058
RUSH ☐ YES ☒ NO

COMMENTS

SAMPLES RECEIVED AT 4°C ☐ YES ☐ NO
SAMPLES IN APPROPRIATE CONTAINERS ☒ YES ☐ NO

PROVIDE VERBAL RESULTS ☐ YES ☐ NO
PROVIDE FAX RESULTS ☒ YES ☐ NO

NO.	SAMPLE I.D.	DATE (7-11-91)	TIME	SAMPLE DESCRIPTION	MATRIX: SOIL	WATER	OTHER	NUMBER OF CONTAINERS	ANALYSES TO BE PERFORMED: HALOGENATED VOLATILES 601/8010	BTEX 602/8020	VOLATILES 624/8240	HCID/FUEL SCAN GC/FID	TPH GASOLINE	TPH DIESEL	TPH 418.1	SEMI VOLATILES 625/8270	PCB's 608/8080	CHLORINATED PESTICIDES 608/8080	TCLP (8) METALS	REMARKS
	DON-01-OB	"	3pm	H_2O		✓		2		✓										
	DON-01-TB	"	"	"		✓		1		✓										

RELINQUISHED BY	COMPANY	DATE/TIME	RECEIVED BY	COMPANY
Robert L. Boese	BB&A	7/11/91 4pm	Robert L. Boese	PNL

PACIFIC
ENVIRONMENTAL
LABORATORY INC.

9405 S.W. Nimbus Ave. Beaverton, OR 97005 (503) 644-0660
FAX # (503) 644-2202

July 29, 1991

Bergeson-Boese & Associates
2560 Frontier Drive
Eugene, OR 97401

Attn: Randy Boese

Re: JOB REFERENCE - DON-01-01
P.O. #5666
PROJECT - 40th & DONALD
PEL #91-2173

Enclosed is the lab report for your samples which were received on July 16, 1991.

I. Sample Description

Two Water Samples

The samples were received under a chain of custody.

The samples were received in a container consistent with EPA protocol.

II. Quality Control

No project specific QC was requested. In-house QC data is available upon request.

III. Analytical Results

Test methods may include minor modifications of published methods such as detection limits or parameter lists. Solid and waste samples are reported on an "as received" basis unless otherwise noted.

Compounds not detected are listed under results as ND.

Sincerely,

Howard Holmes
Lab Manager

Howard Boorse
QA/QC Manager

PACIFIC ENVIRONMENTAL LABORATORY INC.

PEL REPORT NUMBER: 91-2173
CLIENT: Bergeson-Boese & Associates
JOB REFERENCE: DON-01-01
P.O. NUMBER: 5666
PROJECT: 40th & DONALD
DATE: July 29, 1991
ITEMS: Two Water Samples

Sample I.D.	1,2-Dichloroethane -d4	Toluene -d8	4-Bromofluoro-benzene
DON-01-OB	91	95	97
DON-01-TB	93	96	92
EPA Limits	76-114	88-110	86-115

PACIFIC ENVIRONMENTAL LABORATORY INC.

PEL REPORT NUMBER: 91-2173
CLIENT: Bergeson-Boese & Associates
JOB REFERENCE: DON-01-01
P.O. NUMBER: 5666
PROJECT: 40th & DONALD
DATE: July 29, 1991
ITEMS: Two Water Samples

METHOD: Volatiles per EPA 8240
Results in ug/L (ppb)

Compound	DON-01 -TB	Lab Blank	Detection Limit
Acetone	ND	ND	50
Acrolein	ND	ND	100
Acrylonitrile	ND	ND	50
Benzene	ND	ND	2.0
Bromodichloromethane	ND	ND	2.0
Bromoform	ND	ND	2.0
Bromomethane	ND	ND	10
2-Butanone	ND	ND	100
Carbon disulfide	ND	ND	2.0
Carbon tetrachloride	ND	ND	2.0
Chlorobenzene	ND	ND	2.0
Chlorodibromomethane	ND	ND	2.0
Chloroethane	ND	ND	10
Chloroform	ND	ND	2.0
Chloromethane	ND	ND	10
Dibromomethane	ND	ND	2.0
Dichlorobenzenes	ND	ND	2.0
Dichlorodifluoromethane	ND	ND	2.0
1,1-Dichloroethane	ND	ND	2.0
1,2-Dichloroethane	ND	ND	2.0
1,1-Dichloroethene	ND	ND	2.0
cis-1,2-Dichloroethene	ND	ND	2.0
trans-1,2-Dichloroethene	ND	ND	2.0
1,2-Dichloropropane	ND	ND	2.0
cis-1,3-Dichloropropene	ND	ND	2.0
trans-1,3-Dichloropropene	ND	ND	2.0
Ethanol	ND	ND	2.0
Ethylbenzene	ND	ND	2.0
2-Hexanone	ND	ND	2.0
Methylene chloride	ND	ND	2.0
4-Methyl-2-pentanone	ND	ND	2.0
Styrene	ND	ND	2.0
1,1,2,2-Tetrachloroethane	ND	ND	2.0
Tetrachloroethene	ND	ND	2.0
Toluene	ND	ND	2.0
1,1,1-Trichloroethane	ND	ND	2.0
1,1,2-Trichloroethane	ND	ND	2.0
Trichloroethene	ND	ND	2.0
Trichlorofluoromethane	ND	ND	2.0
1,2,3,-Trichloropropane	ND	ND	2.0
Vinyl acetate	ND	ND	10
Vinyl chloride	ND	ND	10
Xylene	ND	ND	2.0

PACIFIC ENVIRONMENTAL LABORATORY INC.

PEL REPORT NUMBER: 91-2173
CLIENT: Bergeson-Boese & Associates
JOB REFERENCE: DON-01-01
P.O. NUMBER: 5666
PROJECT: 40th & DONALD
DATE: July 29, 1991
ITEMS: Two Water Samples

METHOD: Volatiles per EPA 8240
Results in ug/L (ppb)

Compound	DON-01 -OB	Detection Limit
Acetone	ND	250
Acrolein	ND	500
Acrylonitrile	ND	250
Benzene	ND	10
Bromodichloromethane	ND	10
Bromoform	ND	10
Bromomethane	ND	50
2-Butanone	ND	500
Carbon disulfide	ND	10
Carbon tetrachloride	ND	10
Chlorobenzene	ND	10
Chlorodibromomethane	ND	10
Chloroethane	ND	50
Chloroform	ND	10
Chloromethane	ND	50
Dibromomethane	ND	10
Dichlorobenzenes	ND	10
Dichlorodifluoromethane	ND	10
1,1-Dichloroethane	ND	10
1,2-Dichloroethane	ND	10
1,1-Dichloroethene	ND	10
cis-1,2-Dichloroethene	150	10
trans-1,2-Dichloroethene	ND	10
1,2-Dichloropropane	ND	10
cis-1,3-Dichloropropene	ND	10
trans-1,3-Dichloropropene	ND	10
Ethanol	ND	10
Ethylbenzene	ND	10
2-Hexanone	ND	10
Methylene chloride	ND	10
4-Methyl-2-pentanone	ND	10
Styrene	ND	10
1,1,2,2-Tetrachloroethane	ND	10
Tetrachloroethene	45	10
Toluene	ND	10
1,1,1-Trichloroethane	ND	10
1,1,2-Trichloroethane	ND	10
Trichloroethene	200	10
Trichlorofluoromethane	ND	10
1,2,3,-Trichloropropane	ND	10
Vinyl acetate	ND	50
Vinyl chloride	ND	50
Xylene	ND	10

Bergeson-Boese & Associates

Hydr -Geotechnical Research
2560 Frontier Drive
Eugene, Oregon 97401

CHAIN OF CUSTODY RECORD

COMPANY BB&A
PROJECT MANAGER Randy Boese
COLLECTED BY RLB

PROJECT NAME 40th & Donald
PROJECT NUMBER DON-01-01
P.O. NUMBER 5666

LAB PROJECT NO. 91-2173
RUSH ☐ YES ☒ NO

COMMENTS

SAMPLES RECEIVED AT 4°C ☐ YES ☐ NO 3.9° C
SAMPLES IN APPROPRIATE CONTAINERS ☒ YES ☐ NO

PROVIDE VERBAL RESULTS ☐ YES ☐ NO
PROVIDE FAX RESULTS ☒ YES ☐ NO

PEL NO.	SAMPLE I.D.	DATE (7-12-91)	TIME	SAMPLE DESCRIPTION	MATRIX: SOIL	MATRIX: WATER	MATRIX: OTHER	NUMBER OF CONTAINERS	ANALYSES TO BE PERFORMED: HALOGENATED VOLATILES 601/8010	BTEX 602/8020	VOLATILES 624/8240	HCID/FUEL SCAN GC/FID	TPH - GASOLINE	TPH - DIESEL	TPH - 418.1	SEMI-VOLATILES 625/8270	PCB's 608/8080	CHLORINATED PESTICIDES 608/8080	TCLP (8) METALS	REMARKS
	DON-01-0B	"	230 pm	H_2O		✓		2			✓									
	DON-01-TB	"	"	"		✓		1			✓									

RELINQUISHED BY	COMPANY	DATE/TIME	RECEIVED BY	COMPANY
Robert L. Boese	BB&A	7/15/91 900 am		
Greyhound		7-16-91 0845	[illegible]	PEL

PACIFIC
ENVIRONMENTAL
LABORATORY INC.

9405 S.W. Nimbus Ave. Beaverton, OR 97005 (503) 644-0660
FAX # (503) 644-2202

September 16, 1991

Bergeson-Boese & Associates, Inc.
2560 Frontier Drive
Eugene, OR 97401

Attn: Bruce Reiter

Re: JOB #BREO101
P.O. #5670
PROJECT - BRE ESA
PEL #91-2706

Enclosed is the lab report for your sample which was received on September 9, 1991.

I. Sample Description

One Water Sample

The sample was received under a chain of custody.

The sample was received in a container consistent with EPA protocol.

II. Quality Control

No project specific QC was requested. In-house QC data is available upon request.

III. Analytical Results

Test methods may include minor modifications of published methods such as detection limits or parameter lists. Solid and waste samples are reported on an "as received" basis unless otherwise noted.

Compounds not detected are listed under results as ND.

Sincerely,

Howard Holmes
Lab Manager

Howard Boorse
QA/QC Manager

PACIFIC ENVIRONMENTAL LABORATORY INC

PEL REPORT NUMBER: 91-2706
CLIENT: Bergeson-Boese & Associates, Inc.
JOB REFERENCE: BRE0101
P.O. NUMBER: 5670
PROJECT: BRE ESA
DATE: September 16, 1991
ITEM: One Water Sample

METHOD: Volatiles per EPA 8240
Results in ug/L (ppb)

Compound	BRE0101	Lab Blank	Detection Limit
Acetone	ND	ND	50
Acrolein	ND	ND	100
Acrylonitrile	ND	ND	50
Benzene	ND	ND	2.0
Bromodichloromethane	ND	ND	2.0
Bromoform	ND	ND	2.0
Bromomethane	ND	ND	10
2-Butanone	ND	ND	100
Carbon disulfide	ND	ND	2.0
Carbon tetrachloride	ND	ND	2.0
Chlorobenzene	ND	ND	2.0
Chlorodibromomethane	ND	ND	2.0
Chloroethane	ND	ND	10
Chloroform	ND	ND	2.0
Chloromethane	ND	ND	10
Dibromomethane	ND	ND	2.0
Dichlorobenzenes	ND	ND	2.0
Dichlorodifluoromethane	ND	ND	2.0
1,1-Dichloroethane	ND	ND	2.0
1,2-Dichloroethane	ND	ND	2.0
1,1-Dichloroethene	ND	ND	2.0
cis-1,2-Dichloroethene	ND	ND	2.0
trans-1,2-Dichloroethene	ND	ND	2.0
1,2-Dichloropropane	ND	ND	2.0
cis-1,3-Dichloropropene	ND	ND	2.0
trans-1,3-Dichloropropene	ND	ND	2.0
Ethylbenzene	ND	ND	2.0
2-Hexanone	ND	ND	2.0
Methylene chloride	ND	ND	2.0
4-Methyl-2-pentanone	ND	ND	2.0
Styrene	ND	ND	2.0
1,1,2,2-Tetrachloroethane	ND	ND	2.0
Tetrachloroethene	ND	ND	2.0
Toluene	ND	ND	2.0
1,1,1-Trichloroethane	ND	ND	2.0
1,1,2-Trichloroethane	ND	ND	2.0
Trichloroethene	ND	ND	2.0
Trichlorofluoromethane	ND	ND	2.0
1,2,3,-Trichloropropane	ND	ND	2.0
Vinyl acetate	ND	ND	10
Vinyl chloride	ND	ND	10
Xylene	ND	ND	2.0

PACIFIC ENVIRONMENTAL LABORATORY INC

PEL REPORT NUMBER: 91-2706
CLIENT: Bergeson-Boese & Associates, Inc.
JOB REFERENCE: BRE0101
P.O. NUMBER: 5670
PROJECT: BRE ESA
DATE: September 16, 1991
ITEM: One Water Sample

8240 Surrogate Recoveries (%)

Sample I.D.	1,2-Dichloro-ethane-d4	Toluene-d8	4-Bromo-fluorobenzene
BRE0101	100	103	93
EPA Limits	76-114	88-110	86-115

PACIFIC ENVIRONMENTAL LABORATORY INC.

9405 S.W. Nimbus Ave.
Beaverton, OR 97005
(503) 644- 0660
Fax (503) 644-2202

CHAIN OF CUSTODY RECORD

COMPANY Bergeson-Boese & Associates, Inc. PROJECT NAME ERE ESA LAB PROJECT NUMBER 91-2706

PROJECT MANAGER Bruce Reiter PROJECT NUMBER BRE0101

COLLECTED BY Bruce Reiter P.O. NUMBER 5670 RUSH ☐ YES ☒ NO

COMMENTS

P-O-# 5670

SAMPLES RECEIVED AT 4°C ☒ YES ☐ NO

SAMPLES IN APPROPRIATE CONTAINERS ☒ YES ☐ NO

PROVIDE VERBAL RESULTS ☐ YES ☐ NO

PROVIDE PRELIMINARY FAX RESULTS ☐ YES ☐ NO

PROVIDE FINAL FAX RESULTS ☐ YES ☐ NO

PEL NO.	SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: SOIL	MATRIX: WATER	MATRIX: OTHER	NUMBER OF CONTAINERS	TPH - HCID OAR/DEQ	TPH - Gasoline OAR/DEQ	TPH - Diesel OAR/DEQ	TPH - 418.1 Modified OAR/DEQ	HCID - Fuel Scan GC/FID	TPH 418.1	BTEX 602/8020	Halogenated Volatiles 601/8010	Volatiles 624/8240	Semivolatiles 625/8270	PCB's 608/8080	Chlorinated Pesticides 608/8080	TCLP (8) Metals	REMARKS
	BRE0101	9/5/91	2:45pm	CONDENSATE		X		2									X					Preserved - HCl

RELINQUISHED BY	COMPANY	DATE TIME	RECEIVED BY	COMPANY
[illegible]	[illegible]	7:30 9/6/91		
RELINQUISHED BY	COMPANY	DATE TIME	RECEIVED BY	COMPANY
[illegible]		9-11-91 1pm	[illegible]	PEL
RELINQUISHED BY	COMPANY	DATE TIME	RECEIVED BY	COMPANY