Dalton, Olmsted & Fuglevand, Inc. *Environmental Consultants*

11711 Northcreek Parkway S., Suite 101 • Bothell, Washington 98011
Telephone (206) 486-7905 (FAX 486-7651)

May 1, 1996

Elaine Atkinson
Northwest Regional Office
Department of Ecology
3190 - 160th Ave. S.E.
Bellevue, Washington 98008-5452

Re: Request for No Further Action Letter
Bellefield Office Park
Bellevue, Washington
(N-17-5331-000)

Dear Elaine:

On behalf of Spieker Properties, Inc., enclosed with this letter is our report that presents the results of the additional ground-water sampling that Ecology requested to support Spieker Properties' request for a "No Further Action Letter". Also enclosed is a check for $51.20 which is the review fee balance that you referenced in your January 29, 1996 letter.

We look forward to your timely review of our request. Please call if you have any questions.

Sincerely
Dalton, Olmsted & Fuglevand, Inc.

Matthew G. Dalton
Sr. Consulting Hydrogeologist

Enclosures

cc: Don Jefferson

Dalton, Olmsted & Fuglevand, Inc. *Environmental Consultants*

11711 Northcreek Parkway S., Suite 101 • Bothell, Washington 98011
Telephone (206) 486-7905 (FAX 486-7651)

April 30, 1996

Elaine Atkinson
Department of Ecology
Northwest Regional Office
3190 - 160th Ave. S.E.
Bellevue, Washington 98008-5452

Re: Request for No Further Action Letter
Bellefield Office Park
Bellevue, Washington

Dear Ms. Atkinson:

This letter report presents the results of our additional ground-water quality sampling at the Bellefield Office Park located in Bellevue, Washington. The purpose of the work was to provide additional technical support for Ecology to issue a "No Further Action" letter for the site. This work supplements the data and analyses presented in our June 1995 (DOF 1995) report and was conducted consistent with:

- Ecology's January 18, 1996 fax to Dalton, Olmsted & Fuglevand, Inc. (DOF);
- Ecology's January 29, 1996 to letter DOF;
- DOF's February 15, 1996 fax to Ecology; and
- Phone conversations between DOF and Ecology.

On behalf of the site owner, Spieker Properties, Inc., we request that a "No Further Action" letter be issued for the site.

BACKGROUND

In June 1995, Dalton, Olmsted & Fuglevand, Inc. (DOF), submitted to the Washington State Department of Ecology (Ecology) an "Independent Remedial Action Report" to support Spieker Properties request for a "No Further Action" (NFA) letter. In January 1996, DOF received the results of Ecology's review of the report that indicated that additional ground-water and Mercer Slough sediment sampling were required before an NFA letter could be issued. The ground-water quality data was required to provide additional information on whether migration from fills located on the site have the potential to impact the Mercer Slough.

Based on discussions between DOF and Ecology, it was agreed that Ecology could issue a NFA letter with respect to the site fills if additional ground-water quality sampling was completed. Spieker Properties elected not to complete additional sediment sampling because of the uncertainty of delineating the sources of constituents detected in Mercer Slough sediments.

A scope of work was developed with input from Ecology that included the following:

- Installing six monitor wells at the locations shown on Figure 2.

- Collecting and analyzing ground-water samples from the wells for the following constituents:
  - Petroleum hydrocarbons (WTPH-DX);
  - PCBs;
  - Total and dissolved priority pollutant metals; and
  - Polynuclear aromatic hydrocarbons (well DW-5 only).

Well installation procedures and geologic logs are presented in Attachment 1. Ground-water sampling procedures and laboratory data sheets are presented in Attachment 2.

GEOLOGIC OBSERVATIONS

The wells were installed on March 7 and 8, 1996. Drilling was completed to an approximate depth of 14-feet to penetrate into the materials underlying the surface. The materials encountered during drilling generally consisted of a two to four foot thick surface layer of mixed silty SAND, SILT, GRAVEL and wood chips that were underlain by fibrous peat. At locations DW-5 and DW-6, fibrous wood and brick fragments in a silty SAND matrix were encountered at depths of between approximately 10-feet and 14-feet below ground surface.

DEPTH TO GROUND-WATER AND SCREENING INTERVAL

Ground-water was encountered at depths of between approximately 1.2-feet and 3.7-feet below ground level on March 15, 1996. Based on the geologic materials and depth to ground water, well screens were set at a ten-foot depth interval between 2.5-feet and 12.5-feet in each well.

RESULTS OF GROUND-WATER SAMPLING

Ground-water samples were collected using low-flow sampling procedures (see Attachment 2) on March 15, 1996. The results of the laboratory analyses are summarized on Table 1. No

petroleum hydrocarbons, PCBs, cadmium, chromium, copper, mercury, or nickel were detected in any of the ground-water samples.

The following constituents were detected in one or more samples:

TABLE 2 - Summary of Constituent Detections

	Detection Frequency	Concentration Range (ug/l)
Acenaphthene	1/1	1.1
Chrysene	1/1	0.2
Pyrene	1/1	0.11
Total Arsenic	0/6	<4
Dissolved Arsenic	1/6	4.2
Total Iron	6/6	4,000 - 29,000
Dissolved Iron	6/6	4,600 - 27,000
Total Lead	5/6	<2 - 14
Dissolved Lead	2/6	<2 - 2.6
Total Manganese	6/6	900 - 2,500
Dissolved Manganese	6/6	1,100 - 3,100
Total Zinc	4/6	<20 - 68
Dissolved Zinc	1/6	<20 - 44

COMPARISON OF DETECTED CONCENTRATIONS WITH AMBIENT WATER QUALITY CRITERIA

The Bellefield Office Park is surrounded by the Mercer Slough which is the primary receptor of ground-water that migrates from the site. For this reason, concentrations of the constituents detected in the ground-water samples were compared to freshwater ambient water quality criteria developed under the Federal Clean Water Act.

Criteria for manganese and iron are not available. However, these constituents are naturally occurring and are commonly present in ground waters of Washington State. Relatively high concentrations of iron and manganese would be expected in ground water samples from peaty deposits where low dissolved oxygen concentrations typically exist.

Three polynuclear aromatic hydrocarbons (PAHs) were detected in the sample from well DW-5 at concentrations just over the reporting limit. No ambient water quality criteria are available for these constituents. However, the highest concentration (acenaphthene at 1.1 ug/l) is well below the acute and chronic Lowest Observed Effect Level (LOEL) of 1,700 ug/l and 520 ug/l, respectively (EPA 1991). It should be noted that well DW-5 is located and screened directly in the fill materials where petroleum hydrocarbons and PCBs were detected in soil samples (DOF 1995) and is not representative of concentrations that would migrate in ground water. We

would expect that as ground water migrated out of these materials the detected PAHs would decline in concentration by absorption onto the matrix materials.

As summarized above in Table 2, total and/or dissolved arsenic, lead, and zinc were detected in several of the ground-water samples. The concentrations of total lead and zinc are higher than the dissolved concentrations and are attributed to a larger number of particulates being present in the unfiltered (total) samples as compared to the filtered (dissolved) samples.

The Environmental Protection Agency (EPA) has developed freshwater ambient water quality criteria for the detected metals and recommends that dissolved metal concentrations be used:

> *"It is the policy of the Office of Water that the use of dissolved metal to set and measure compliance with water quality standards is the recommended approach, because dissolved metal more closely approximates the bioavailable fraction of metal in the water column than does total recoverable metal"* (EPA 1995).

The dissolved concentration range and ambient water quality criteria are summarized below in Table 3. The criteria for lead and zinc are hardness (as $CaCO_3$) dependent. A hardness value of 85 mg/l was used to develop the criteria based on a sample obtained from the Mercer Slough on April 5, 1996.

TABLE 3 - Comparison of Ground-Water and Ambient Water Quality Criteria (1)

	Concentration Range(2)	Acute (3)	Chronic(4)
Arsenic	<4 to 4.2	360	190
Lead	<2 to 2.6	54	2.1
Zinc	<20 to 44	100	90

Notes:
(1) - Concentrations and criteria in ug/l - ppb.
(2) - Dissolved metal concentrations
(3) - Dissolved metal criteria based on Criteria Maximum Concentration (CMC) - the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (1-hour average) without deleterious effects.
(4) - Dissolved metal criteria based on Criteria Continuous Concentration (CCC) - the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects.

As indicated in Table 3, none of the metal concentrations in ground water exceed the acute criteria or exceed the chronic criteria for arsenic and zinc. The dissolved lead chronic criterion of 2.1 ug/l is only marginally exceeded in the sample from DW-2 where a dissolved lead concentration of 2.6 ug/l was measured.

It should be noted that the ambient water quality criteria were developed for assessing impacts to aquatic organisms via direct contact. The only exceedance of any of the criteria was for lead in a ground water sample from a well (DW-2) located in the center of the business park (Figure 2).

CONCLUSIONS

The supplemental ground-water quality data collected as part of this current work supports Spieker Properties request for a No Further Action letter associated with the site fills. The available ground-water quality data indicates little potential for the fills to impact the Mercer Slough environment.

The primary contaminants of concern, based on the soil data, are petroleum hydrocarbons and PCBs. These compounds were not detected in any of the ground water samples collected/analyzed during this work.

Several dissolved metals were measured above reporting limits in several of the ground-water samples. The concentrations of the detected metals are below acute ambient water quality criteria and only one of the six locations sampled marginally exceeded a chronic criteria at a location in the center of the office park.

REFERENCES

- Dalton, Olmsted & Fuglevand, Inc., 1995, Independent Remedial Action Report, Bellefield Office Park, Bellevue, Washington, Prepared for Spieker Properties, Inc., June 1995.

- EPA, 1991, Water Quality Criteria Summary, May 1, 1991 (based on Ambient Water Quality Criteria for Acenaphthene, EPA 440/5-80-015, October 1980).

- EPA, 1992, 40 CFR Part 131 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance; Final Rule that appeared in the December 22, 1992 Federal Register; and

- EPA, 1995, 40 CFR Part 131 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance; Revision of Metals Criteria - Interim Rule that appeared in the May 4, 1995 Federal Register.

CLOSING

The services described in this report were performed consistent with generally accepted professional consulting principals and practices. No other warranty, expressed or implied,

is made. These services were performed for the sole use and information of Spieker Properties, Inc. for specific application to the Bellefield Office Park. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for Spieker Properties purposes (i.e. obtaining a No Further Action Letter), locations, time frames and indicated project parameters. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Dalton, Olmsted & Fuglevand, Inc.

Matthew G. Dalton
Sr. Consulting Hydrogeologist

attachments: Figure 1 - Site Vicinity Map
Figure 2 - Well Location Map
Table 1 - Summary of Ground-Water Quality Data

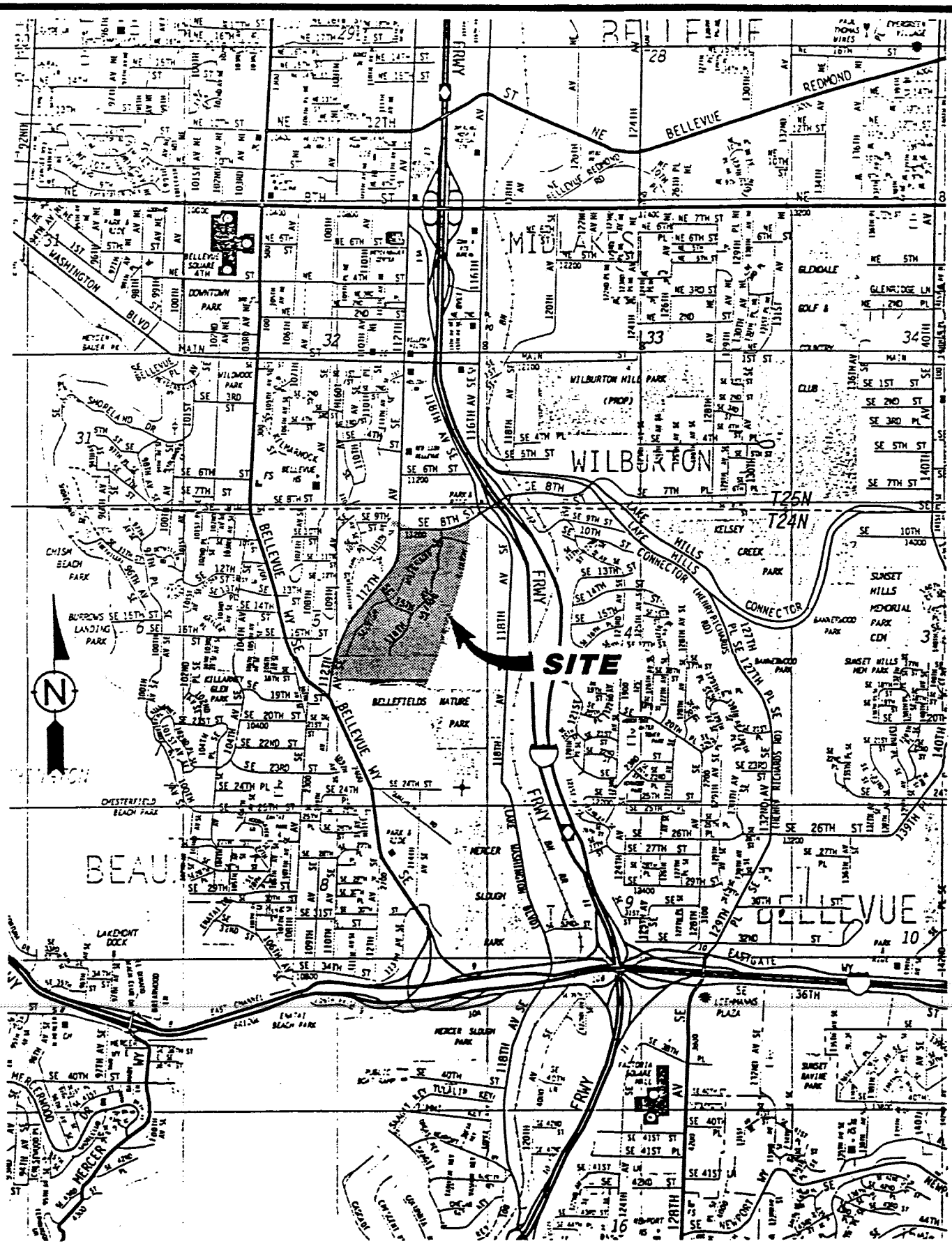
Attachment 1 - Well Installation Field Procedures and Logs
Attachment 2 - Ground-Water Sampling Procedures and Laboratory Data Sheets

TABLE 1 - Summary of Water Quality Data

Bellefield Office Park
Bellevue, Washington

Constituents/Well Nos.	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6
Petroleum Hydrocarbons (mg/l)						
Diesel Range (C12-C24)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Heavy Oil Range (>C24)	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
Polychlorinated Biphenyls (PCBs) - ug/l						
PCB 1016	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB 1221	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB 1260	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Polynuclear Aromatic Hydrocarbons (ug/l)						
Acenaphthene	-----	-----	-----	-----	**1.1**	-----
Anthracene	-----	-----	-----	-----	<1.0	-----
Benzo(a)anthracene	-----	-----	-----	-----	<1.0	-----
Benzo(a)pyrene	-----	-----	-----	-----	<0.1	-----
Benzo(b)fluoranthene	-----	-----	-----	-----	<0.1	-----
Benzo(g,h,i)perylene	-----	-----	-----	-----	<0.1	-----
Benzo(k)fluoranthene	-----	-----	-----	-----	<0.1	-----
Chrysene	-----	-----	-----	-----	**0.2**	-----
Dibenzo(a,h)anthracene	-----	-----	-----	-----	<0.1	-----
Fluroanthene	-----	-----	-----	-----	<0.1	-----
Fluorene	-----	-----	-----	-----	<1.0	-----
Indeno(1,2,3-cd)pyrene	-----	-----	-----	-----	<0.1	-----
Naphthalene	-----	-----	-----	-----	<1.0	-----
Phenanthrene	-----	-----	-----	-----	<1.0	-----
Pyrene	-----	-----	-----	-----	**0.11**	-----
Total Metals (ug/l)						
Arsenic	<4	<4	<4	<4	<4	<4
Cadmium	<5	<5	<5	<5	<5	<5
Chromium	<10	<10	<10	<10	<10	<10
Copper	<30	<30	<30	<30	<30	<30
Iron	**4000**	**19000**	**13000**	**9600**	**23000**	**29000**
Lead	**7**	**14**	**3.4**	<2	**5.8**	**5.4**
Manganese	**1100**	**920**	**1600**	**2500**	**900**	**1700**
Mercury	<1	<1	<1	<1	<1	<1
Nickel	<30	<30	<30	<30	<30	<30
Zinc	<20	**41**	<20	**21**	**68**	**25**
Dissolved Metals (ug/l)						
Arsenic	<4	<4	**4.2**	<4	<4	<4
Cadmium	<5	<5	<5	<5	<5	<5
Chromium	<10	<10	<10	<10	<10	<10
Copper	<30	<30	<30	<30	<30	<30
Iron	**4600**	**18000**	**13000**	**10000**	**22000**	**27000**
Lead	**2.1**	**2.6**	<2	<2	<2	<2
Manganese	**1400**	**1100**	**1800**	**3100**	**1100**	**1800**
Mercury	<1	<1	<1	<1	<1	<1
Nickel	<30	<30	<30	<30	<30	<30
Zinc	<20	<20	<20	<20	**44**	<20

Notes: ----- - not analyzed



RZA-AGRA
ENGINEERING & ENVIRONMENTAL SERVICES

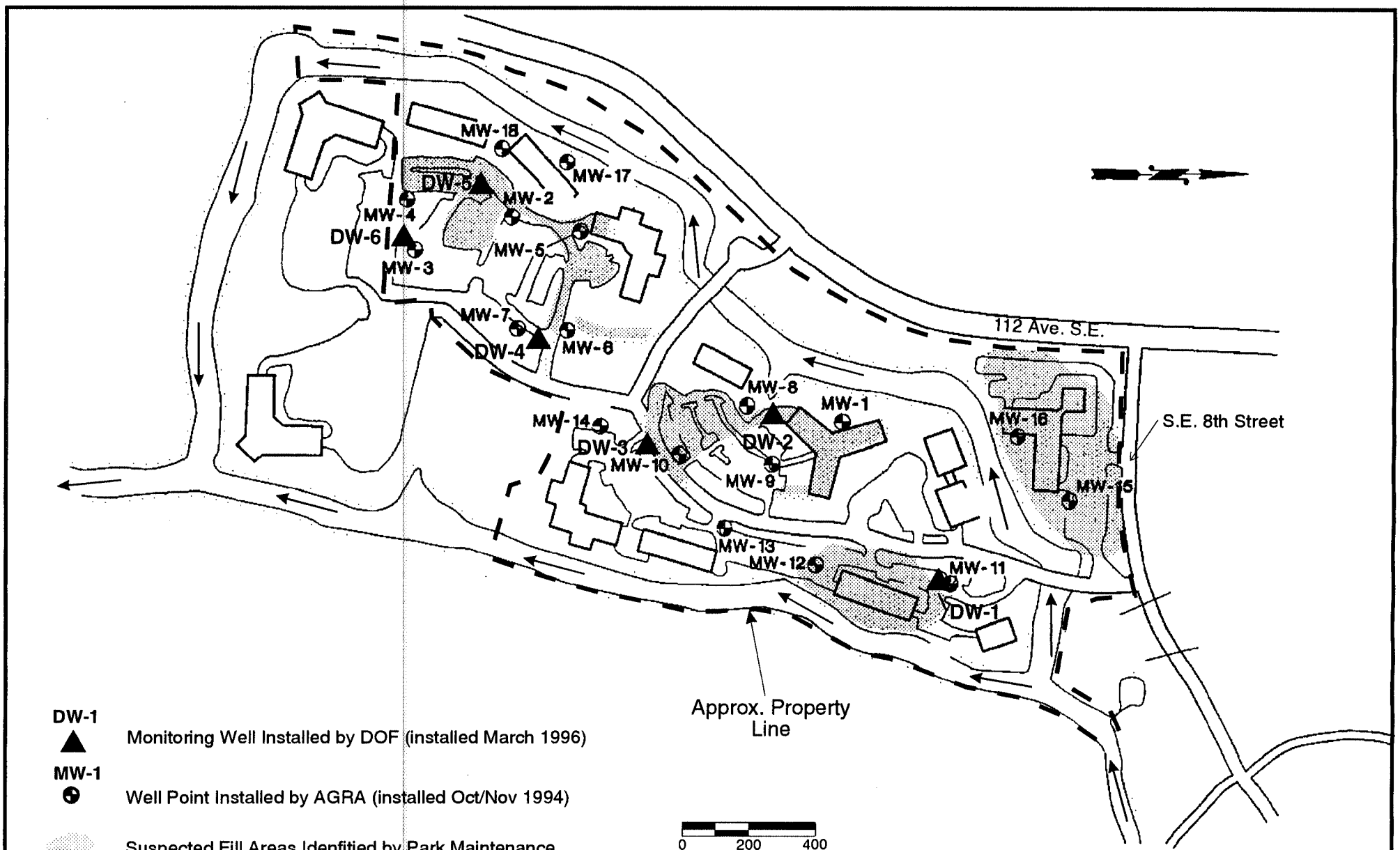
11335 N.E. 122nd Way
Suite 100
Kirkland, Washington
98034-6918

W.O.	3
DESIGN	SST
DRAWN	DMW
DATE	JAN 1994
SCALE	N.T.S.

BELLEFIELD OFFICE PARK
11201 SOUTHEAST 8th STREET
BELLEVUE, WASHINGTON

LOCATION MAP

FIGURE 1



Bellefield Office Park
Bellevue, Washington

Well and Well Point Location Map

HEW-020 **FIGURE 2** April 1996

Dalton, Olmsted & Fuglevand, Inc.

site1ud.cdr

ATTACHMENT 1
WELL INSTALLATION FIELD PROCEDURES
AND GEOLOGIC/WELL LOGS
BELLEFIELD OFFICE PARK

The wells were installed by Holt Drilling, Inc. using a Mobile Drill B59 hollow-stem auger drilling rig on March 7 and 8, 1996. Dave Cooper, a geologist representing Dalton, Olmsted & Fuglevand, Inc., observed the drilling and well installation. During drilling, soil samples were obtained using a 2-inch to 3-inch split-spoon drive sampler. The number of blows to drive the samplers a distance of three successive 6-inch intervals were recorded.

Once the final drilling depth was reached, the wells were installed by lowering 2-inch diameter, Schedule 40 PVC screen and riser pipe through the auger center. A sand pack was installed around and above the screeen as the auger was extracted. The well was finished by placing a bentonite chip and concrete seal above the sand pack and installing a flush-to-ground monument.

Dalton, Olmsted & Fuglevand, Inc.
Environmental Consultants

MONITORING WELL NO. DW-1 - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION

Field Rep:D. Cooper	Location:
Drilling Co.: Holt	Elevation:
Driller: Clyde	Date Completed: 3/8/96
Drill Type: Mobile B59	Weather: clear & warm
Size/Type Casing: 4" I.D. Hollow-Stem Auger	

Spl.No.	Type	Drill Action	Spl Depth (Ft. From - To	Blows/ 6 inches	Spl length	Field Tests	Sample Description
1	2"Drive	Gravely	2.5 - 4	6/6/11	2"	none	Wood chip in shoe; poor recovery
2	3"Drive	Jerky	5 - 6.5	3/3/3	0"	none	No recovery; springy drive motion
3	3"Drive	smooth	7.5 - 9	0/1/1	18"	none	V. soft, brown, fibrous PEAT
4	3"Drive	smooth	10 - 11.5	0/2/3	18"	none	Same
5	3"Drive	smooth	12.5 - 14	0/0/1	18"	none	Same, less fibrous

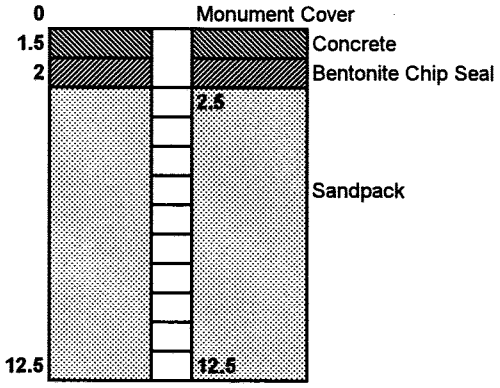
Depth(ft.) **SUMMARY LOG**

0
Gray, gravely, silty SAND w/ brick
2 fragments (Till Fill)
Wood chip (in sampler drive shoe)

Very soft, brown, fibrous PEAT

14 Less fibrous at 12.5-feet
(Bottom of Boring)

MONITORING WELL DIAGRAM



NOTES:
1. No sheens observed during drilling or sampling.
2. The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.

MONITORING WELL INFORMATION

Riser Length: 2'	Diameter: 2-inches
Sandpack: 10-20 Sand (top/bot) 2.5'/12.5'	Seal: Bentonite/Concrete (top/bot) 0/2.5'
Screen: PVC/0.010" length 10' (top/bot) 2.5'/12.5'	Monument: Cast Iron - flush

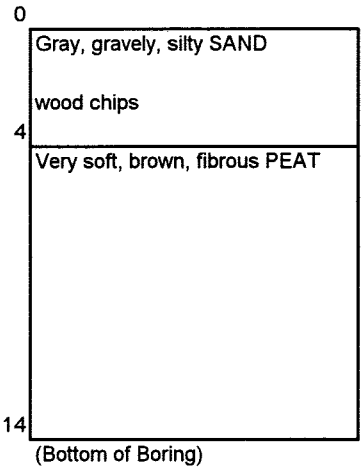
Dalton, Olmsted & Fuglevand, Inc.
Environmental Consultants

MONITORING WELL NO. DW-2 - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION

Field Rep:D. Cooper	Location:
Drilling Co.: Holt	Elevation:
Driller: Clyde	Date Completed: 3/8/96
Drill Type: Mobile B59	Weather: clear & warm
Size/Type Casing: 4" I.D. Hollow-Stem Auger	

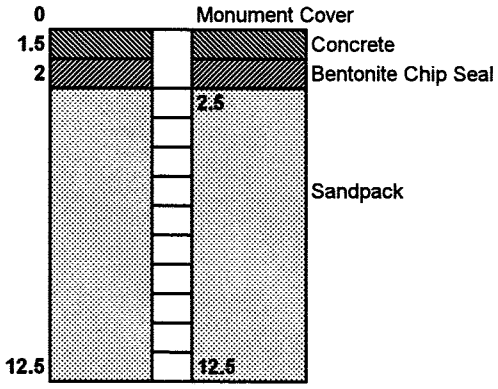
Spl.No.	Type	Drill Action	Spl Depth (Ft. From - To	Blows/ 6 inches	Spl length	Field Tests	Sample Description
1	3"Drive	Stiff	2.5 - 4	11/17/45	12"	none	Mottled brown, gravel, sand and silt w/ wood chip
2	3"Drive	Gravely/cobble	5 - 6.5	50-4"	2"	none	Fibrous wood - 2" spalls - poor recovery
3	3"Drive	smooth	7.5 - 9	0/1/1	18"	none	V. soft, brown, fibrous PEAT
4	3"Drive	smooth	10 - 11.5	0/0/1	18"	none	Same
5	3"Drive	smooth	12.5 - 14	0/0/1	18"	none	Same

Depth(ft.) **SUMMARY LOG**



(Bottom of Boring)

MONITORING WELL DIAGRAM



NOTES:
1. No sheens observed during drilling or sampling.
2. The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.

MONITORING WELL INFORMATION

Riser Length: 2'		Diameter: 2-inches	
Sandpack: 10-20 Sand		Seal:	Bentonite/Concrete
	(top/bot) 2.5'/12.5'		(top/bot) 0/2.5'
Screen:	PVC/0.010"	Monument:	Cast Iron - flush
	length 10'		
	(top/bot) 2.5'/12.5'		

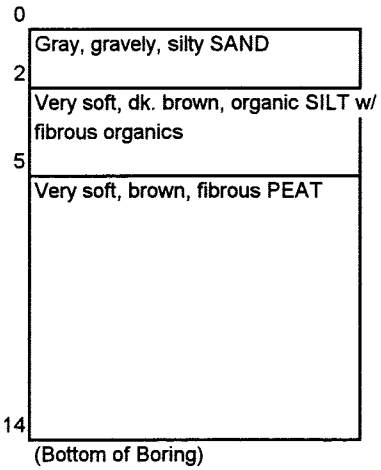
Dalton, Olmsted & Fuglevand, Inc.
Environmental Consultants

MONITORING WELL NO. DW-3 - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION

Field Rep:D. Cooper	Location:
Drilling Co.: Holt	Elevation:
Driller: Clyde	Date Completed: 3/7/96
Drill Type: Mobile B59	Weather: clear & warm
Size/Type Casing: 4" I.D. Hollow-Stem Auger	

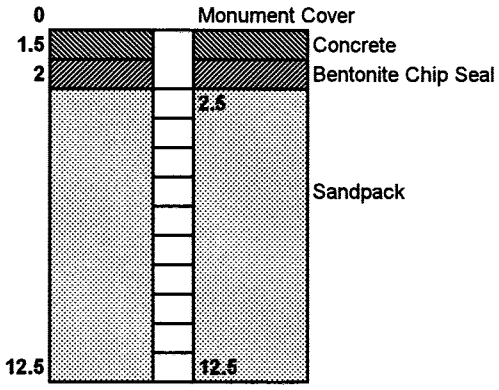
Spl.No.	Type	Drill Action	Spl Depth (Ft. From - To	Blows/ 6 inches	Spl length	Field Tests	Sample Description
1	2"Drive	smooth	2.5 - 4	1-12"	12"	none	V.soft, dk. brown, SILT w/fibrous organics
2	2"Drive	smooth/easy	5 - 6.5	6/0/0	0"	none	No recovery
3	2"Drive	smooth	7.5 - 9	0/1/1	18"	none	V. soft, brown, fibrous PEAT
4	2"Drive	smooth	10 - 11.5	0/0/1	18"	none	Same
5	2"Drive	smooth	12.5 - 14	0/0/1	18"	none	Same

Depth(ft.) **SUMMARY LOG**



(Bottom of Boring)

MONITORING WELL DIAGRAM



NOTES:
1. No sheens observed during drilling or sampling.
2. The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.

MONITORING WELL INFORMATION

Riser Length: 2'	Diameter: 2-inches
Sandpack: 10-20 Sand (top/bot) 2.5'/12.5'	Seal: Bentonite/Concrete (top/bot) 0/2.5'
Screen: PVC/0.010" length 10' (top/bot) 2.5'/12.5'	Monument: Cast Iron - flush

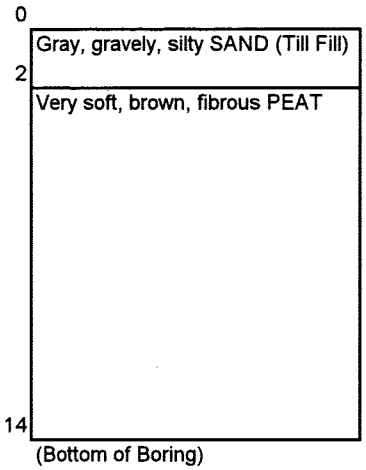
Dalton, Olmsted & Fuglevand, Inc.
Environmental Consultants

MONITORING WELL NO. DW-4 - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION

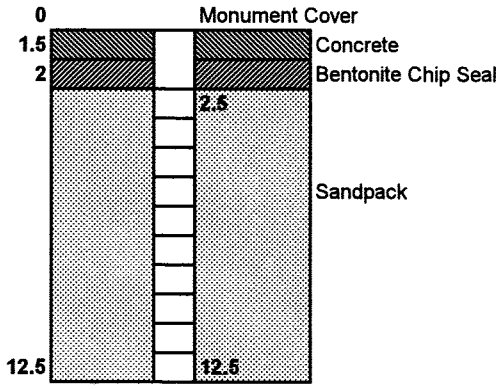
Field Rep:D. Cooper — Location:
Drilling Co.: Holt — Elevation:
Driller: Clyde — Date Completed: 3/7/96
Drill Type: Mobile B59 — Weather: clear & warm
Size/Type Casing: 4" I.D. Hollow-Stem Auger

Spl.No.	Type	Drill Action	Spl Depth (Ft. From - To	Blows/ 6 inches	Spl length	Field Tests	Sample Description
1	2"Drive	gravely	2.5 - 4	0/0/1	1"	none	Wood in shoe, poor recovery
2	2"Drive	jerky action	5 - 6.5	20-0"	1"	none	Wood chip in shoe (log?)
3	2"Drive	smooth	7.5 - 9	15/5/2	12"	none	6" dk.br. wood chip over v.loose, brown fibrous PEAT
4	2"Drive	smooth	10 - 11.5	3/1/1	1"	none	Fibrous peat in shoe
5	2"Drive	jerky	12.5 - 14	15/7/5	1"	none	Dr. brown wood fragments

Depth(ft.) **SUMMARY LOG**



MONITORING WELL DIAGRAM



NOTES:
1. No sheens observed during drilling or sampling.
2. The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.

MONITORING WELL INFORMATION

Riser Length: 2'	Diameter: 2-inches
Sandpack: 10-20 Sand (top/bot) 2.5'/12.5'	Seal: Bentonite/Concrete (top/bot) 0/2.5'
Screen: PVC/0.010" length 10' (top/bot) 2.5'/12.5'	Monument: Cast Iron - flush

Dalton, Olmsted & Fuglevand, Inc.
Environmental Consultants

MONITORING WELL NO. DW-5 - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION

Field Rep:D. Cooper — Location:
Drilling Co.: Holt — Elevation:
Driller: Clyde — Date Completed: 3/8/96
Drill Type: Mobile B59 — Weather: clear & warm
Size/Type Casing: 4" I.D. Hollow-Stem Auger

Spl.No.	Type	Drill Action	Spl Depth (Ft. From - To	Blows/ 6 inches	Spl length	Field Tests	Sample Description
1	3"Drive	easy	2.5 - 4	50-4"	4"	none	Wet, brown, silty SAND w/ wood fragments
2	3"Drive	smooth	5 - 6.5	50-3"	3"	none	Black, fibrous wood in silty SAND matrix (sl. sheen)
3	3"Drive	smooth	7.5 - 9	50-3"	0"	none	No recovery; spongy blows likely wood fiber
4	3"Drive	smooth	10 - 11.5	50-5"	5"	none	Black, fibrous wood in silty SAND matrix; brick frags.
5	3"Drive	smooth	12.5 - 14	7/18/30	----	none	Same (plastic cup debris in sampler)

Depth(ft.) **SUMMARY LOG**

0
Dk. brown to black, silty SAND w/ wood frags and black coal-like frags. (no sheen)
4
Black, wood fibers in silty SAND matrix, (plastic sheeting and slight sheen at 5'-6')

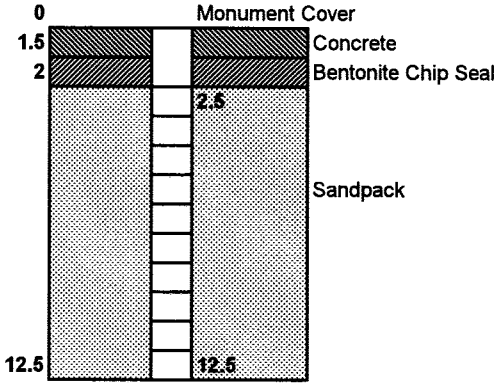
- no sheens below 6'
- brick fragments

- plastic cup in sampler

14
(Bottom of Boring)

NOTES:
1. The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.

MONITORING WELL DIAGRAM



MONITORING WELL INFORMATION

Riser Length: 2'	Diameter: 2-inches
Sandpack: 10-20 Sand (top/bot) 2.5'/12.5'	Seal: Bentonite/Concrete (top/bot) 0/2.5'
Screen: PVC/0.010" length 10' (top/bot) 2.5'/12.5'	Monument: Cast Iron - flush

Dalton, Olmsted & Fuglevand, Inc.
Environmental Consultants

MONITORING WELL NO. DW-6 - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION

Field Rep:D. Cooper	Location:
Drilling Co.: Holt	Elevation:
Driller: Clyde	Date Completed: 3/8/96
Drill Type: Mobile B59	Weather: clear & warm
Size/Type Casing: 4" I.D. Hollow-Stem Auger	

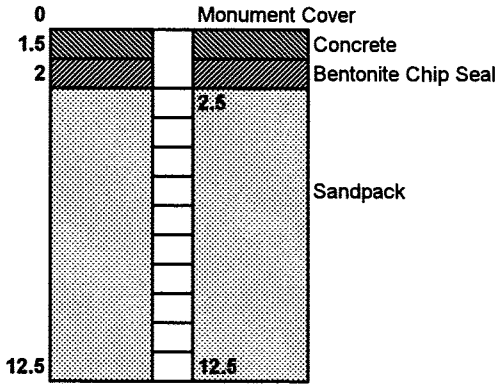
Spl.No.	Type	Drill Action	Spl Depth (Ft. From - To	Blows/ 6 inches	Spl length	Field Tests	Sample Description
1	3"Drive	gravely	2.5 - 4	50-6"	6"	none	Wet, mottled gray, gravely, silty SAND
2	3"Drive	hard, gravely	5 - 6.5	10/11/22	12"	none	Black,brown, wood fibers and sandy GRAVEL
3	3"Drive	smoother	7.5 - 9	17/25/42	6"	none	Black-brown, wood fibers in silty SAND, brick frags.
4	3"Drive	smooth	10 - 11.5	6/5/7	0"	none	No recovery
5	3"Drive	smooth	12.5 - 14	50-2"	2"	none	Dk. brown, wood fibers in silty SAND, brick frags.

Depth(ft.) **SUMMARY LOG**

0
Gray, gravely, silty SAND (no sheen)
4
Black to brown, wood fibers and sandy GRAVEL w/ silt and brick fragments (slight sheen at 5' to 6')
7
Black to brown, wood fiber in black silty SAND matrix w/ brick fragments (no sheen)
14
(Bottom of Boring)

NOTES:
(1) The summary log is an interpretation based on samples, drill action, and interpolation. Variations between what is shown and actual conditions should be anticipated.

MONITORING WELL DIAGRAM



MONITORING WELL INFORMATION

Riser Length: 2'	Diameter: 2-inches
Sandpack: 10-20 Sand (top/bot) 2.5'/12.5'	Seal: Bentonite/Concrete (top/bot) 0/2.5'
Screen: PVC/0.010" length 10' (top/bot) 2.5'/12.5'	Monument: Cast Iron - flush

ATTACHMENT 2
GROUND-WATER SAMPLING PROCEDURES
AND LABORATORY DATA SHEETS
BELLEFIELD OFFICE PARK

The wells were sampled on March 15, 1996 using low-flow sampling techniques. Purging and sampling was conducted with a peristaltic pump at an approximate discharge rate of 0.5 liters per minute. All tubing was replaced prior to sampling each well. During sampling, temperature, pH, electrical conductivity and turbidity were measured in the field. Samples were obtained after the field parameters stabilzed to within 10%. Between 1 and 9 casing volumes were removed prior to sampling. The field data for samples submitted to the laboratory are summarized in Table 2-1 below:

TABLE 2-1 - Summary of Field Measurements

Well	Volume Removed (liters)	Temp. (C)	pH	Conductivity (uS)	Turbidity (NTU)
DW-1	1.3	13.6	6.3	607	3.1
DW-2	8.9	11.1	6.2	440	8.5
DW-3	1.1	11.1	6.2	507	1.6
DW-4	1.1	10.8	6.4	648	4.9
DW-5	1.1	9.5	6.4	450	3.4
DW-6	3.9	9.9	6.4	694	4.8

Samples for dissolved metals analysis were passed through an in-line 0.45 micron filter (GWV High Capacity In-line Groundwater Sampling Capsule by Gelman Sciences) using the peristaltic pump. Samples were placed in jars provided by the receiving laboratory (North Creek Analytical - Bothell, WA). After each container was filled, it was placed into chilled coolers and were transported to the laboratory the same day using standard chain-of-custody procedures.

Samples were analyzed using standard EPA or Washington State Methods. The laboratory data sheets are presented with this attachment.

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Dalton, Olmsted & Fuglevand, Inc.	Project Name:	Bellefield Office Park	
11711 N. Creek Parkway, #D-101	Client Project :	Not Provided	
Bothell, WA 98011			Received: Apr 5, 1996
Attention: Matt Dalton	NCA Project #:	B604082	Reported: Apr 8, 1996

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
B604082-01	HARDNESS #1	Water	4/5/96

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
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Laura Dutton

Laura Dutton
Project Manager

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Apr 5, 1996
11711 N. Creek Parkway, #D-101	Sample Matrix:	Water	Received:	Apr 5, 1996
Bothell, WA 98011	Analysis Method:	SM 2340-B/6010	Digested:	Apr 6, 1996
Attention: Matt Dalton	First Sample #:	B604082-01	Analyzed:	Apr 8, 1996
			Reported:	Apr 8, 1996

LABORATORY ANALYSIS FOR: HARDNESS

Sample Number	Sample Description	Reporting Limit mg/L (ppm)	Sample Result mg/L (ppm)
B604082-01	HARDNESS #1	1.0	83
BLK040696	Method Blank	1.0	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

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Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix : Water
Units: mg/L (ppm)

Digested: Apr 6, 1996
Reported: Apr 8, 1996

QUALITY CONTROL DATA REPORT

ANALYTE
Hardness

EPA Method: SM 2340-B/6010
Date Analyzed: Apr 8, 1996

ACCURACY ASSESSMENT

LCS Spike Conc. Added:	6.62
LCS Spike Result:	8.05
LCS Spike % Recovery:	122
Upper Control Limit:	125
Lower Control Limit:	75
Matrix Spike Sample #:	B604080-01
MS/MSD % Recovery:	Q-3/Q-3

PRECISION ASSESSMENT

Sample #:	B604080-01
Original:	720
Duplicate:	710
Relative % Difference:	1.4

NORTH CREEK ANALYTICAL Inc.

Laura Dutton
Project Manager

Please Note:
Q-3 = The Spike Recovery for this QC sample cannot be accurately calculated due to high concentration of analyte in the sample.

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

CHAIN OF CUSTODY REPORT

Work Order # B604082

REPORT TO: Matt Dalton
ATTENTION: DOF
ADDRESS:
PHONE: 486-7905 **FAX:**
PROJECT NAME: Bellefield Office Park
PROJECT NUMBER:
SAMPLED BY: T. Olmstead

INVOICE TO: DOF Attn: M Dalton
ATTENTION:
ADDRESS:
P.O. NUMBER: **NCA QUOTE #:**

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 Standard | 7 | 5 | 4 | 3 | 2 | 1 | Same Day

Fuels & Hydrocarbon Analyses: 5 Standard | 3-4 | 2 | 1 | Same Day

OTHER Specify:

* *Turnaround Requests less than standard may incur Rush Charges.*

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Analysis Request: Hardness as CaCO3	MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
1.	Hardness #1	4/5/96 1030	B603082-01	X	W	1	
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

RELINQUISHED BY (Signature): T. Olmstead DATE: 4/5/96
PRINT NAME: T. Olmstead FIRM: DOF TIME: 1030

RECEIVED BY (Signature): Laura Dutton DATE: 4/5
PRINT NAME: Laura Dutton FIRM: NCA TIME: 1038

RELINQUISHED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

PAGE 1 OF 1

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Dalton, Olmsted & Fuglevand, Inc.	Project Name:	Bellefield Office Park	
11711 N. Creek Parkway, #D-101	Client Project :	#HEW-020	
Bothell, WA 98011			Received: Mar 18, 1996
Attention: Matt Dalton	NCA Project #:	B603293	Reported: Apr 2, 1996

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
B603293-01	DW-1	Water	3/15/96
B603293-02	DW-2	Water	3/15/96
B603293-03	DW-3	Water	3/15/96
B603293-04	DW-4	Water	3/15/96
B603293-05	DW-5	Water	3/15/96
B603293-06	DW-6	Water	3/15/96
B603293-07	DUPL-1 (DW-3)	Water	3/15/96

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
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Laura Dutton
Project Manager

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Matrix:	Water	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	WTPH-D Extended	Extracted:	Mar 18, 1996
Attention: Matt Dalton	First Sample #:	B603293-01	Analyzed:	Mar 21-22, 1996
			Reported:	Mar 22, 1996

TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE EXTENDED

Sample Number	Sample Description	Diesel Result mg/L (ppm)	Heavy Oil Result mg/L (ppm)	Surrogate Recovery %
B603293-01	DW-1	N.D.	N.D.	90, C-3
B603293-02	DW-2	N.D.	N.D.	85, C-3
B603293-03	DW-3	N.D.	N.D.	78, C-3
B603293-04	DW-4	N.D.	N.D.	76, C-3
B603293-05	DW-5	N.D.	N.D.	77, C-3
B603293-06	DW-6	N.D.	N.D.	94, C-3
B603293-07	DUPL-1	N.D.	N.D.	66, C-3
BLK031896	Method Blank	N.D.	N.D.	82, C-3

Reporting Limit:	**0.25**	**0.75**

2-Fluorobiphenyl surrogate recovery control limits are 50 - 150%.
Extractable Hydrocarbons are quantitated as Diesel Range Organics (C12 - C24) and Heavy Oil Range Organics (>C24).
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-3 = To reduce matrix interference, the sample extract has undergone silica-gel clean-up, Method 3630, which is specific to polar compound contamination.

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Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix: Water
Analysis Method: WTPH-D
Units: mg/L (ppm)

Extracted: Mar 18, 1996
Analyzed: Mar 21, 1996
Reported: Mar 22, 1996

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Diesel, C-3

Spike Conc. Added:	2.04
Spike Result:	1.78
% Recovery:	87
Upper Control Limit %:	121
Lower Control Limit %:	54

PRECISION ASSESSMENT
Sample Duplicate

Diesel Range Organics, C-3

Sample Number:	B603293-01
Original Result:	N.D.
Duplicate Result:	N.D.
Relative % Difference:	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Reporting Limit.
Maximum RPD:	44

C-3 = To reduce matrix interference, the sample extract has undergone a silica-gel cleanup, Method 3630, which is specific to non-polar compound contamination.

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Laura Dutton

Laura Dutton
Project Manager

% Recovery: $\frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$

Relative % Difference: $\frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-1	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-01 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 69
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-2	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-02 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 59
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-3	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-03 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 59
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-4	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-04 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 57
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-5	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-05 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 64
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-6	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-06 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 63
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DUPL-1	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8080	Extracted:	Mar 20, 1996
Attention: Matt Dalton	Sample Number:	B603293-07 C-1, C-2	Analyzed:	Mar 22, 1996
			Reported:	Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 64
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Descript: Method Blank
Analysis Method: EPA 8080
Sample Number: BLK032096 C-1, C-2

Extracted: Mar 20, 1996
Analyzed: Mar 22, 1996
Reported: Apr 1, 1996

POLYCHLORINATED BIPHENYLS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
PCB 1016	0.10	N.D.
PCB 1221	0.10	N.D.
PCB 1232	0.10	N.D.
PCB 1242	0.10	N.D.
PCB 1248	0.10	N.D.
PCB 1254	0.10	N.D.
PCB 1260	0.10	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 79
Surrogate Recovery Control Limits are 24 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix: Water
Analysis Method: EPA 8080
Units: µg/L (ppb)
QC Sample #: BLK032096 C-1, C-2

Extracted: Mar 20, 1996
Analyzed: Mar 22, 1996
Reported: Apr 1, 1996

BLANK SPIKE QUALITY CONTROL DATA REPORT

ANALYTE	Aroclor 1260
Sample Result:	N.D.
Spike Conc. Added:	10.0
Spike Result:	7.13
Spike % Recovery:	71%
Spike Dup. Result:	7.39
Spike Duplicate % Recovery:	74%
Upper Control Limit %:	125
Lower Control Limit %:	35
Relative % Difference:	3.6%
Maximum RPD:	24

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Laura Dutton

Laura Dutton
Project Manager

Please Note:
C-1 = To reduce matrix interference, the sample extract has undergone Sulfuric acid clean-up, Method 3665, which is specific to hydrocarbon contamination.
C-2 = To reduce matrix interference, the sample extract has undergone copper clean-up, Method 3660, which is specific to sulfur contamination.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	Water, DW-5	Received:	Mar 18, 1996
Bothell, WA 98011	Analysis Method:	EPA 8310	Extracted:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-05	Analyzed:	Mar 25, 1996
			Reported:	Apr 2, 1996

POLYNUCLEAR AROMATIC HYDROCARBONS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Acenaphthene	**1.0**	**1.1**
Acenaphthylene	1.0	N.D.
Anthracene	1.0	N.D.
Benzo (a) anthracene	0.10	N.D.
Benzo (a) pyrene	0.10	N.D.
Benzo (b) fluoranthene	0.10	N.D.
Benzo (ghi) perylene	0.10	N.D.
Benzo (k) fluoranthene	0.10	N.D.
Chrysene	**0.10**	**0.20**
Dibenzo (a,h) anthracene	0.10	N.D.
Fluoranthene	0.10	N.D.
Fluorene	1.0	N.D.
Indeno (1,2,3-cd) pyrene	0.10	N.D.
Naphthalene	1.0	N.D.
Phenanthrene	1.0	N.D.
Pyrene	**0.10**	**0.11**

2-Fluorobiphenyl Surrogate Recovery, %: 87
Surrogate Recovery Control Limits are 28 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park		
11711 N. Creek Parkway, #D-101	Sample Descript:	Method Blank		
Bothell, WA 98011	Analysis Method:	EPA 8310	Extracted:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	BLK032296	Analyzed:	Mar 25, 1996
			Reported:	Apr 2, 1996

POLYNUCLEAR AROMATIC HYDROCARBONS

Analyte	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Acenaphthene	1.0	N.D.
Acenaphthylene	1.0	N.D.
Anthracene	1.0	N.D.
Benzo (a) anthracene	0.10	N.D.
Benzo (a) pyrene	0.10	N.D.
Benzo (b) fluoranthene	0.10	N.D.
Benzo (ghi) perylene	0.10	N.D.
Benzo (k) fluoranthene	0.10	N.D.
Chrysene	0.10	N.D.
Dibenzo (a,h) anthracene	0.10	N.D.
Fluoranthene	0.10	N.D.
Fluorene	1.0	N.D.
Indeno (1,2,3-cd) pyrene	0.10	N.D.
Naphthalene	1.0	N.D.
Phenanthrene	1.0	N.D.
Pyrene	0.10	N.D.

2-Fluorobiphenyl Surrogate Recovery, %: 80
Surrogate Recovery Control Limits are 28 - 118 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix: Water
Analysis Method: EPA 8310
Units: µg/L (ppb)
QC Sample #: BLK032296

Extracted: Mar 22, 1996
Analyzed: Mar 25, 1996
Reported: Apr 2, 1996

BLANK SPIKE QUALITY CONTROL DATA REPORT

ANALYTE	Fluorene	Indeno(1,2,3-cd) pyrene	Chrysene
Sample Result:	N.D.	N.D.	N.D.
Spike Conc. Added:	10.0	10.0	10.0
Spike Result:	7.88	10.2	7.70
Spike % Recovery:	79%	102%	77%
Spike Dup. Result:	8.67	11.0	8.70
Spike Duplicate % Recovery:	87%	110%	87%
Upper Control Limit %:	124	137	113
Lower Control Limit %:	19	15	16
Relative % Difference:	10%	8%	11%
Maximum RPD:	39	28	27

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Project Manager

$$\%\ \text{Recovery:} \quad \frac{\text{Spike Result - Sample Result}}{\text{Spike Conc. Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Spike Result - Spike Dup. Result}}{(\text{Spike Result + Spike Dup. Result}) / 2} \times 100$$

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-1	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-01	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**4,000**
Lead	**7421**	**2.0**	**7.0**
Manganese	**6010**	**5.0**	**1,100**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-2	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-02	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**19,000**
Lead	**7421**	**2.0**	**14**
Manganese	**6010**	**5.0**	**920**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	**6010**	**20**	**41**

Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-3	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-03	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**13,000**
Lead	**7421**	**2.0**	**3.4**
Manganese	**6010**	**5.0**	**1,600**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-3	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-03	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**13,000**
Lead	**7421**	**2.0**	**3.4**
Manganese	**6010**	**5.0**	**1,600**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-4	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-04	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**9,600**
Lead	7421	2.0	N.D.
Manganese	**6010**	**5.0**	**2,500**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	**6010**	**20**	**21**

Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

Laura Dutton
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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-5	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-05	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**23,000**
Lead	**7421**	**2.0**	**5.8**
Manganese	**6010**	**5.0**	**900**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	**6010**	**20**	**68**

Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-6	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-06	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**29,000**
Lead	**7421**	**2.0**	**5.4**
Manganese	**6010**	**5.0**	**1,700**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	**6010**	**20**	**25**

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DUPL-1	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water	Digested:	Mar 22, 1996
Attention: Matt Dalton	Sample Number:	B603293-07	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**13,000**
Lead	**7421**	**2.0**	**4.0**
Manganese	**6010**	**5.0**	**1,500**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

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Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Descript: Method Blank
Sample Matrix: Water
Sample Number: BLK032296

Digested: Mar 22, 1996
Analyzed: Mar 22-27, 1996
Reported: Apr 1, 1996

TOTAL METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	6010	150	N.D.
Lead	7421	2.0	N.D.
Manganese	6010	5.0	N.D.
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-1	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water		
Attention: Matt Dalton	Sample Number:	B603293-01	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

DISSOLVED METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**4,600**
Lead	**7421**	**2.0**	**2.1**
Manganese	**6010**	**5.0**	**1,400**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

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Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-2	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water		
Attention: Matt Dalton	Sample Number:	B603293-02	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

DISSOLVED METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**18,000**
Lead	**7421**	**2.0**	**2.6**
Manganese	**6010**	**5.0**	**1,100**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

603293.DOF <25>

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-3	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water		
Attention: Matt Dalton	Sample Number:	B603293-03	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

DISSOLVED METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	**7060**	**4.0**	**4.2**
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**13,000**
Lead	7421	2.0	N.D.
Manganese	**6010**	**5.0**	**1,800**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

603293.DOF <26>

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.	Client Project ID:	Bellefield Office Park	Sampled:	Mar 15, 1996
11711 N. Creek Parkway, #D-101	Sample Descript:	DW-4	Received:	Mar 18, 1996
Bothell, WA 98011	Sample Matrix:	Water		
Attention: Matt Dalton	Sample Number:	B603293-04	Analyzed:	Mar 22-27, 1996
			Reported:	Apr 1, 1996

DISSOLVED METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	**6010**	**150**	**10,000**
Lead	7421	2.0	N.D.
Manganese	**6010**	**5.0**	**3,100**
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

603293.DOF <27>

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Descript: Method Blank
Sample Matrix: Water
Sample Number: BLK0322-032796

Analyzed: Mar 22-27, 1996
Reported: Apr 1, 1996

DISSOLVED METALS ANALYSIS

Analyte	EPA Method	Reporting Limit µg/L (ppb)	Sample Results µg/L (ppb)
Arsenic	7060	4.0	N.D.
Cadmium	6010	5.0	N.D.
Chromium	6010	10	N.D.
Copper	6010	30	N.D.
Iron	6010	150	N.D.
Lead	7421	2.0	N.D.
Manganese	6010	5.0	N.D.
Mercury	7470 Modified	1.0	N.D.
Nickel	6010	30	N.D.
Zinc	6010	20	N.D.

Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

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NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix : Water
Units: µg/L (ppb)

Digested: Mar 22, 1996
Reported: Apr 1, 1996

TOTAL METALS QUALITY CONTROL DATA REPORT

ANALYTE	As	Cd	Cr	Cu	Fe	Pb	Mn
EPA Method:	7060	6010	6010	6010	6010	7421	6010
Date Analyzed:	Mar 25, 1996	Mar 27, 1996	Mar 25, 1996	Mar 25, 1996	Mar 25, 1996	Mar 22, 1996	Mar 25, 1996
ACCURACY ASSESSMENT							
LCS Spike Conc. Added:	50.0	1,000	1,000	1,000	1,000	25	1,000
LCS Spike Result:	56.9	710	810	840	880	24	840
LCS Spike % Recovery:	114	71	81	84	88	96	84
Upper Control Limit:	132	98	102	105	125	122	118
Lower Control Limit:	84	66	68	57	72	88	58
Matrix Spike Sample #:	B603293-01	B603293-02	B603293-02	B603293-02	B603293-02	B603293-01	B603293-02
MS/MSD % Recovery:	114/114	78/73	84/78	84/81	Q-3/Q-3	104/90	82/79
PRECISION ASSESSMENT							
Sample #:	B603293-01	B603293-02	B603293-02	B603293-02	B603293-02	B603293-01	B603293-02
Original:	N.D.	N.D.	N.D.	N.D.	19,000	7.0	920
Duplicate:	N.D.	N.D.	N.D.	N.D.	20,000	7.3	890
Relative % Difference:	Q-5	Q-5	Q-5	Q-5	5.1	Q-5	3.3

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Please Note:
Q-3 = The Spike Recovery for this QC sample cannot be accurately calculated due to high concentration of analyte in the sample.
Q-5 = RPD values are not reported at sample concentrations <10 X the Reporting Limit.

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix : Water
Units: µg/L (ppb)

Reported: Apr 1, 1996

DISSOLVED METALS QUALITY CONTROL DATA REPORT

ANALYTE	As	Cd	Cr	Cu	Fe	Pb	Mn
EPA Method:	206.2	6010	6010	6010	6010	239.2	6010
Date Analyzed:	Mar 25, 1996	Mar 27, 1996	Mar 25, 1996	Mar 25, 1996	Mar 25, 1996	Mar 22, 1996	Mar 25, 1996
ACCURACY ASSESSMENT							
LCS Spike Conc. Added:	50.0	1,000	1,000	1,000	1,000	25	1,000
LCS Spike Result:	54.3	780	810	820	840	24	840
LCS Spike % Recovery:	109	78	81	82	84	96	84
Upper Control Limit:	132	98	102	105	125	122	118
Lower Control Limit:	84	66	68	57	72	88	58
Matrix Spike Sample #:	B603293-01	B603293-03	B603293-03	B603293-03	B603293-03	B603293-01	B603293-03
MS/MSD % Recovery:	111/107	94	96/93	97/95	Q-3/Q-3	103/104	91/84
PRECISION ASSESSMENT							
Sample #:	B603293-01	B603293-03	B603293-03	B603293-03	B603293-03	B603293-01	B603293-03
Original:	N.D.	N.D.	N.D.	N.D.	13,000	2.1	1,800
Duplicate:	N.D.	N.D.	N.D.	N.D.	13,000	N.D.	1,800
Relative % Difference:	Q-5	Q-5	Q-5	Q-5	0.0	Q-5	0.0

NORTH CREEK ANALYTICAL Inc.

Laura Dutton
Project Manager

Please Note:
Q-3 = The Spike Recovery for this QC sample cannot be accurately calculated due to high concentration of analyte in the sample.
Q-5 = RPD values are not reported at sample concentrations <10 X the Reporting Limit.

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Dalton, Olmsted & Fuglevand, Inc.
11711 N. Creek Parkway, #D-101
Bothell, WA 98011
Attention: Matt Dalton

Client Project ID: Bellefield Office Park
Sample Matrix : Water
Units: µg/L (ppb)

Reported: Apr 1, 1996

DISSOLVED METALS QUALITY CONTROL DATA REPORT

ANALYTE	Hg	Ni	Zn
EPA Method:	7470 Modified	6010	6010
Date Analyzed:	Mar 25, 1996	Mar 25, 1996	Mar 25, 1996
ACCURACY ASSESSMENT			
LCS Spike Conc. Added:	5.0	1,000	1,000
LCS Spike Result:	4.7	820	810
LCS Spike % Recovery:	94	82	81
Upper Control Limit:	114	115	109
Lower Control Limit:	75	48	55
Matrix Spike Sample #:	B603293-02	B603293-03	B603293-03
MS/MSD % Recovery:	90/90	97/92	103/100
PRECISION ASSESSMENT			
Sample #:	B603293-02	B603293-03	B603293-03
Original:	N.D.	N.D.	N.D.
Duplicate:	N.D.	N.D.	N.D.
Relative % Difference:	RPD values are not reported at sample concentration levels <10 X the Reporting Limit.		

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Laura Dutton
Project Manager

Lab Control Sample % Recovery: $\frac{\text{Conc. of L.C.S.}}{\text{L.C.S. Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508 (206) 481-9200 FAX 485-2992
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

CHAIN OF CUSTODY REPORT

Work Order # B603293

REPORT TO: DALTON, OLMSTED & FUGLEVAND
ATTENTION: MATT DALTON
ADDRESS: BOTHELL, WA
PHONE: 486-7905 FAX:
PROJECT NAME: BELLEFIELDS OFFICE PARK
PROJECT NUMBER: HEW-020
SAMPLED BY: DG COOPER

INVOICE TO: D.O.E.
ATTENTION: MATT DALTON
ADDRESS:
P.O. NUMBER: NCA QUOTE #:

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: [X] Standard | 7 | 5 | 4 | 3 | 2 | 1 | Same Day
Fuels & Hydrocarbon Analyses: [X] Standard | 3-4 | 2 | 1 | Same Day
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Analysis Request: WTPH-DX	PCB's (8081)	PAH's	METALS (TOT.)*	METALS (FILT.)*	MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
1.	DW-1	3/15	B603293-01	X	X		X	X	W		
2.	DW-2	1500	-02	X	X		X	X			
3.	DW-3	1330	-03	X	X		X	X		4	
4.	DW-4	1230	-04	X	X		X	X		4	
5.	DW-5	1145	-05	X	X	X	X	X		6	
6.	DW-6	1030	-06	X	X		X	X		4	
7.	DUPL-1 (DW-3)	1335	-07	X	X		X	X		4	
8.											
9.											
10.											

RELINQUISHED BY (Signature): DG Cooper DATE: 3/18/96
PRINT NAME: DG Cooper FIRM: DOE TIME: 0900

RECEIVED BY (Signature): M. Girard DATE: 3/18/96
PRINT NAME: M. Girard FIRM: NCA TIME: 9:05

RELINQUISHED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: * ANALYZE FOR METALS: Ar, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Zn, Hg
– USE ACID WASH/SILICA GEL CLEANUP FOR TPH-DX