

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

11711 Northcreek Parkway S., Suite 101 • Bothell, Washington 98011  
Telephone (425) 486-7905 (FAX 486-7651)

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FEB 04 1998

DEPT. OF ECOLOGY

February 2, 1998

Mr. Daniel Cargill  
Department of Ecology  
3190 - 160<sup>th</sup> Ave S.E.  
Bellevue, WA 98008-5452

Re: Bellefield Office Park  
Bellevue, Washington  
N-17-5331-000

Dear Mr. Cargill:

On behalf of Spieker Properties, enclosed with this letter is a report that summarizes the results of ground-water quality monitoring for 1996 and 1997 for the referenced property. The monitoring was completed consistent with the requirements of the No Further Action (NFA) letter issued by the Department of Ecology for the property in November 1996.

One of the requirements of the NFA letter is to monitor ground-water quality for five years. The enclosed report summarizes data for the first one and one-half years of the monitoring. In 1998, sampling is scheduled to be completed in March and October. The results of the 1998 sampling will be submitted to Ecology in an annual report prepared after the October analytical results are received.

Please call if you have any questions.

Sincerely

Dalton, Olmsted & Fuglevand, Inc.



Matthew G. Dalton  
Sr. Consulting Hydrogeologist

enclosure

cc: Richard Leider - Spieker Properties, Inc.

ref: HEW-020-03 (ecoltr1.doc)

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11711 Northcreek Parkway S., Suite 101 • Bothell, Washington 98011  
Telephone (425) 486-7905 (FAX 486-7651)

January 28, 1998

Richard Leider  
Spieker Properties, Inc.  
1150 114th Ave. S.E.  
Bellevue, WA 98004-6914

RECEIVED  
FEB 04 1998  
DEPT. OF ECOLOGY

Re: Summary of 1996 and 1997 Ground-Water Sampling Events  
Bellefield Office Park

Dear Richard:

This report presents the results of our ground-water sampling conducted in 1996 and 1997 at the Bellefield Office Park, Bellevue, Washington (Figure 1). Well locations are shown on Figure 2. The sampling was completed consistent with the Washington State Department of Ecology (Ecology) "No Further Action" (NFA) letter dated November 1, 1996. As stated in the letter:

*"Confirmational monitoring of the permanent on-site wells should therefore occur semi-annually for an additional three year period, then annually for another two years, at which time Ecology will review the information to ensure continued protection of human health and the environment. All monitoring wells should be tested for TPH and total arsenic, lead and zinc. In addition, monitoring wells DW-2 and DW-5 should be analyzed for PAHs, while DW-3, DW-4, DW-5 and DW-6 should be tested for PCBs."*

Ground-water sampling required by the NFA letter started in December 1996. Sampling rounds following the NFA letter were completed in December of 1996, and in June and October of 1997. One round of ground water samples was collected and analyzed in March of 1996, prior to the NFA letter.

During the December 1996 round, three wells, DW-4, -5 and -6 could not be sampled for the following reasons: Wells DW-4 and DW-5, were not sampled because they could not be located due to construction activities. Well DW-6 was not sampled because it had been damaged at the ground surface.

Well DW-5 was ultimately located following completion of road improvements. Well DW-6 was repaired in May, 1997 and well DW-4 that could not be located was also replaced at that time.

## **REPLACEMENT AND REPAIR OF WELLS**

Well DW-4 was replaced in May, 1997 in the location shown on Figure 2 using the procedures outlined in Attachment 1. A log of the replacement well for well DW-4 [DW-4(R)] is provided in Attachment 1 along with the installation procedures. Well DW-5 was found after completing roadway improvements and did not require repairs. Well DW-6 was repaired by replacing the upper 12 inches of riser pipe with new 2" PVC piping and resetting the flush-mount casing. The repair procedures were completed at the time of installing well DW-4(R).

## **SAMPLING PROCEDURES AND FIELD MEASUREMENTS**

Ground-water samples were collected, following issuance of the NFA letter, in December 1996 and in June and October 1997. Terry Olmsted, Sr. Consulting Geologist of Dalton, Olmsted & Fuglevand, Inc. collected the samples.

Low flow/low turbidity sampling procedures were used to collect the ground-water samples. Purging and sampling were completed using a peristaltic pump with a discharge rate of approximately 0.5 liters per minute. During purging, field measurements were made for depth to water, temperature, pH, specific conductivity and turbidity. Ground-water samples were collected after at least three casing volumes had been removed from the wells and the field parameters stabilized to within 10%. The field measurements made immediately prior to sample collection are summarized in Table 1.

Samples were collected directly into containers provided by the receiving laboratory (North Creek Analytical Inc.) that, in turn, were placed into chilled coolers for transport to the laboratory. Samples were delivered to the laboratory on the same day or the day following collection. Standard chain-of-custody procedures were used to document sampling handling.

## **GROUND-WATER QUALITY**

In accordance with the requirements of the NFA letter, analyses were made for petroleum hydrocarbons (using Method WTPH-D-extended) and total arsenic, lead and zinc in samples from wells DW-1, DW-2, DW-3, DW-4/4(R), DW-5, and DW-6. Samples from DW-2 and DW-5 were also analyzed for polycyclic aromatic hydrocarbons (PAHs) and the samples from DW-3, DW-4/4(R), DW-5, AND DW-6 were also analyzed for PCBs. The results of the ground-water quality analyses required by the NFA letter are summarized in attached Table 1 along with the results of the previous analyses made in March 1996. Laboratory data sheets for the December 1996, June 1997 and October 1997 rounds are presented in Attachments 2, 3, and 4, respectively.

**Total Petroleum Hydrocarbons.** Heavy-oil hydrocarbons (>C24) were not detected (reporting limit <0.75 mg/l) in any of the wells with the exception of one detection in well DW-4(R) in June 1997 at 0.83 mg/l, which is near the reporting limit. It should be noted that this single detection occurred in the first sampling of this replacement well, further, there was no silica gel/acid wash cleanup to reduce possible biogenic matrix interference. The subsequent sampling of DW-4(R) in October 1997 did not detect heavy-oil range hydrocarbons.

Diesel-range hydrocarbons (C12 to C24) were detected, have been near the reporting limit of <0.25 mg/l, generally ranging from 0.29 mg/l to 0.49 mg/l, with the exception of one sample from DW-4(R) taken in June 1997 where diesel-range hydrocarbons were detected at 0.88 mg/l. The December 1996 and June 1997 sample detections are likely the result of biogenic matrix interference, since silica gel/acid wash cleanup was not applied to these samples. Further, as noted above, this single detection of diesel-range hydrocarbons in well DW-4(R) occurred in the first sampling of this replacement well. No diesel-range hydrocarbons were detected in any of the well samples from the March 1996 (prior to the NFA letter) or the October 1997 sampling event where silica gel/acid wash cleanup was applied.

**Polychlorinated Biphenyls (PCBs).** PCBs have not been detected during any sampling round in any of the water samples from the wells.

**Polynuclear Aromatic Hydrocarbons (PAHs).** Samples from Wells DW-2 and DW-5 were analyzed for PAHs. The PAH analytes detected are listed below. The indicated detections are intermittent and have been at or near laboratory reporting limits.

**Detected PAHs (concentration in ug/l)**

	<u>Acenaphthene</u>	<u>Benzo(b)fluoranthene*</u>	<u>Chrysene*</u>	<u>Dibenzo(a,h)anthracene*</u>	<u>Fluorene</u>	<u>Pyrene</u>
<b><u>DW-2</u></b>						
12/96	<1.0	<0.1	<0.1	<0.1	<1.0	<0.1
6/97	<5.0	<0.1	<0.1	<0.1	<b>0.80</b>	<0.1
10/97	<1.0	<b>0.17</b>	<b>0.22</b>	<b>0.29</b>	<1.0	<1.0
<b><u>DW-5</u></b>						
3/96	<b>1.1</b>	<0.1	<b>0.20</b>	<0.1	<1.0	<b>0.11</b>
6/97	<5.0	<0.1	<0.1	<0.1	<b>0.66</b>	<0.1
10/97	<b>1.5</b>	<0.1	<0.1	<0.1	<1.0	<1.0

< = concentration below indicated laboratory reporting limits

\* = carcinogenic PAH (CPAH)

**Total Metals.** For the three sampling rounds completed since the NFA letter, samples from wells DW-1 through DW-6 have been analyzed for total arsenic, lead, and zinc. The following table summarizes the detections. As shown, arsenic concentrations, with one exception, have been below the laboratory reporting limit of 4 ug/l. Lead concentrations have been somewhat variable in wells DW-1, DW-2 and DW-3, however results of the last sampling round (October 1997) indicated concentrations near the reporting limit of 2 ug/l. Zinc concentrations, overall, have been near or below method reporting limits of 20 ug/l.

	<i>Detected Metals (concentration in ug/l)</i>			
	Arsenic	Lead	Zinc	Turbidity NTUs
<b><u>DW-1</u></b>				
3/96	<4	7.0	<20	3.1
12/96	<4	28	<20	1.5
6/97	<4	19	<20	1.0
10/97	<4	4.3	<20	1.8
<b><u>DW-2</u></b>				
3/96	<4	14	41	8.5
12/96	<4	3.6	<20	1.2
6/97	<4	24	27	4.7
10/97	<4	3.4	<20	2.9
<b><u>DW-3</u></b>				
3/96	<4	3.4	<20	1.6
12/96	8.0	29.5	22	1.3
6/97	<4	<2	<20	0.8
10/97	<4	2.0	<20	0.8
<b><u>DW-4/4(R)</u></b>				
3/96	<4	<5	21	4.9
6/97	<4	4.8	<20	4.1
10/97	<4	<2	<20	1.5
<b><u>DW-5</u></b>				
3/96	<4	5.8	68	3.4
6/97	<4	2.6	30	1.1
10/97	<4	2.4	24	1.6
<b><u>DW-6</u></b>				
3/96	<4	5.4	25	4.8
6/97	<4	<2	<20	4.5
10/97	<4	2.7	<20	3.0

## 1998 SCHEDULED SAMPLING ROUNDS

In 1998 sampling rounds are scheduled to be completed in March and October.

## CLOSING

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of Spieker Properties, Inc. unless otherwise noted. 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 our client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in

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

Richard Leider - Spieker Properties, Inc.  
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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.

Please call if you have any questions.

Sincerely

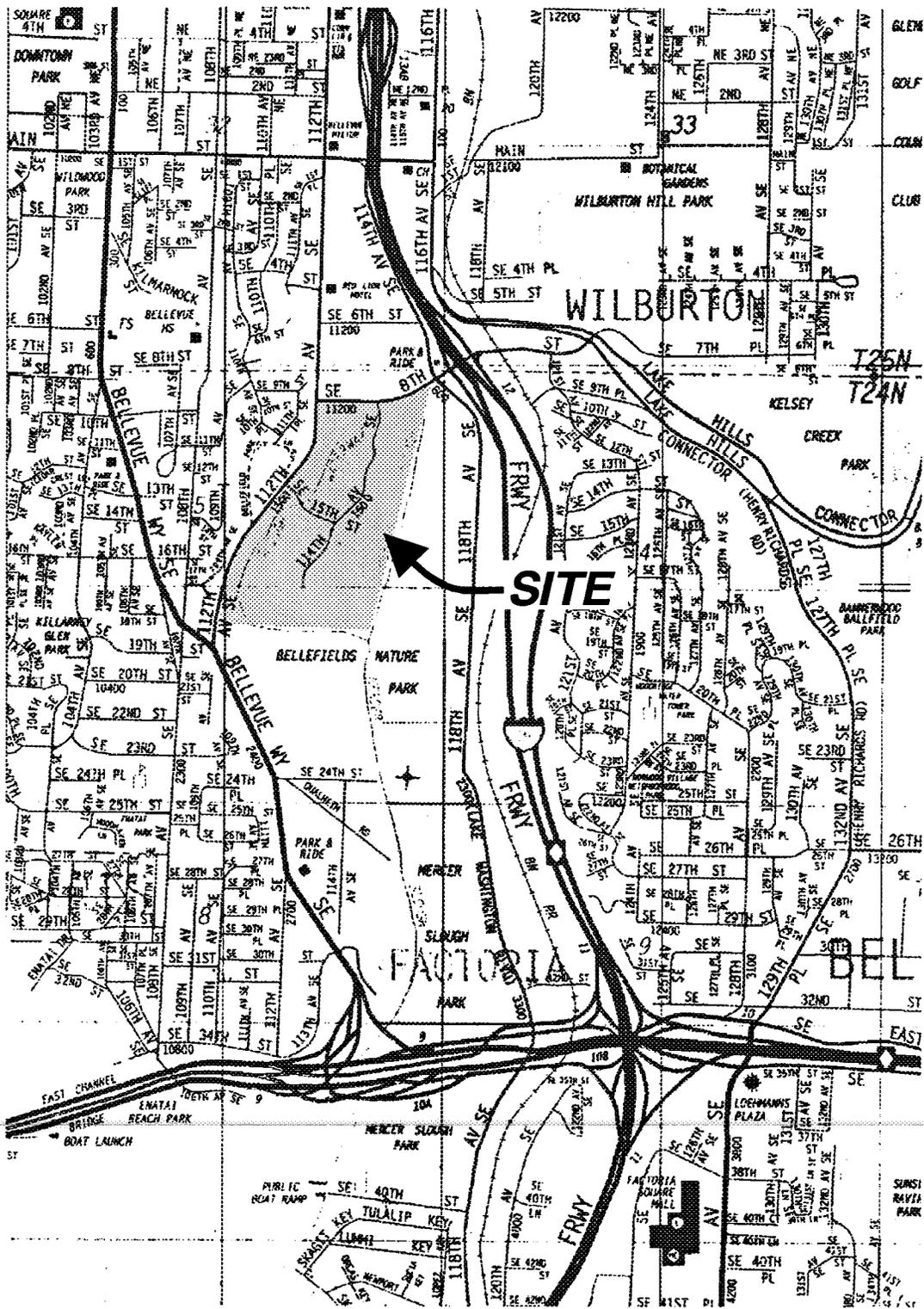
Dalton, Olmsted & Fuglevand, Inc.



Matthew G. Dalton

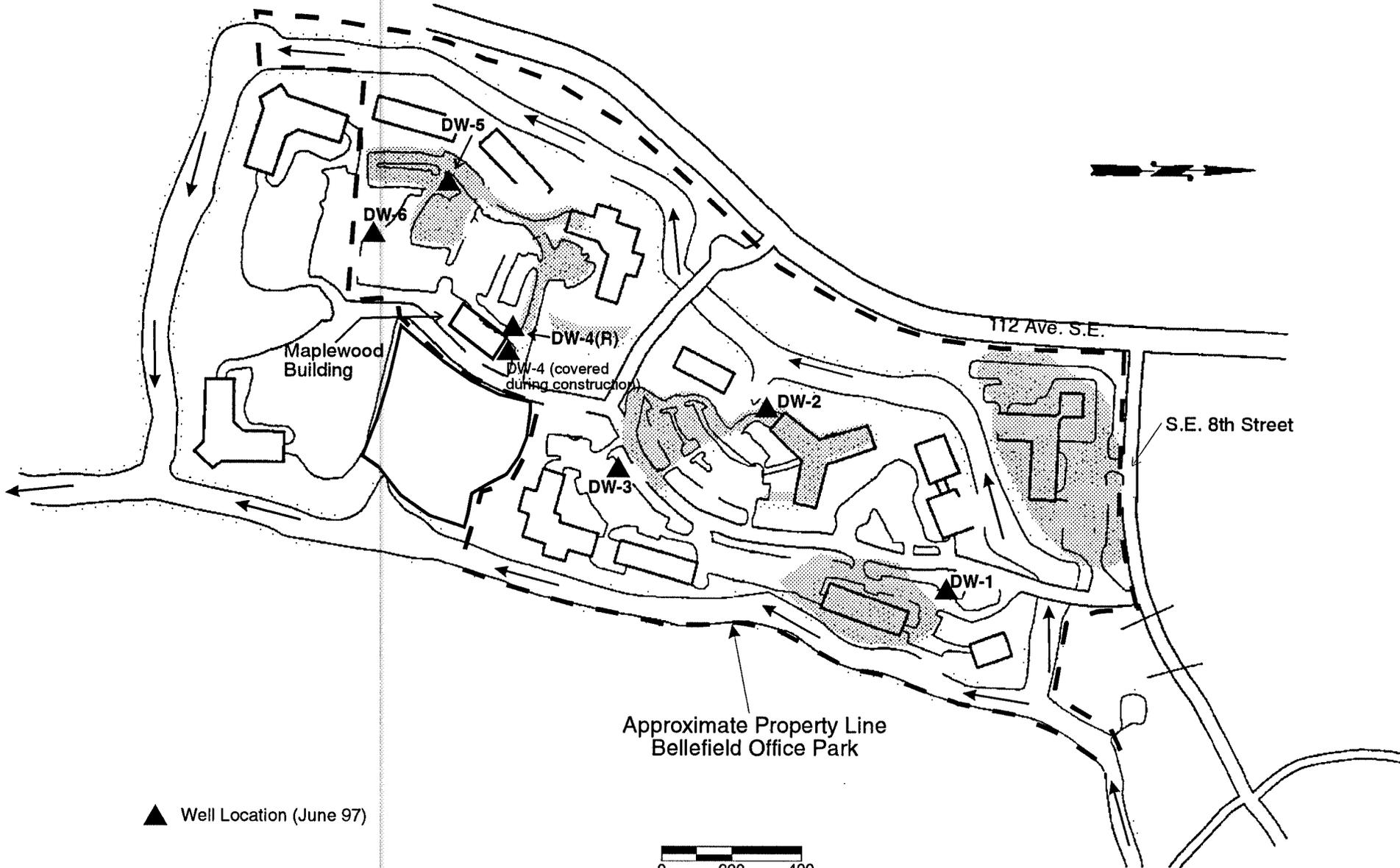
Sr. Consulting Hydrogeologist

Attachments    Table 1 - Summary of Water Quality Data  
                    Figure 1 - Site Vicinity Map  
                    Figure 2 - Well Location Map  
                    Attachment 1. Well Installation and Well Log of Monitoring  
                                    Well No. MW-4(R)  
                    Attachment 2. Laboratory Data Sheets - December 1996  
                    Attachment 3. Laboratory Data Sheets - June 1997  
                    Attachment 4. Laboratory Data Sheets - October 1997



Bellefield Office Park  
Bellevue Washington

**VICINITY MAP**



▲ Well Location (June 97)

Approximate Property Line  
Bellefield Office Park

0 200 400  
Approx. Scale in Feet

Bellefield Office Park  
Bellevue, Washington  
**WELL  
LOCATIONS**

HEW-020-03 **FIGURE 2** August 97  
Dalton, Olmsted & Fuglevand, Inc.

**ATTACHMENT 1**  
**WELL INSTALLATION AND WELL LOG OF REPLACEMENT WELL**  
**NO. DW-4(R)**  
**BELLEFIELD OFFICE PARK**

Replacement well No. DW-4(R) was installed on May 16, 1996 by Holt Drilling, Inc., using a Mobile Drill model B59 truck-mounted hollow-stem auger drill rig. Terry Olmsted, Sr. Consulting Geologist of Dalton, Olmsted & Fuglevand, Inc., observed the drilling and well installation, and prepared a description of samples, tests, and well installation details that are provided on the log included in this attachment.

During drilling, soil samples were obtained using a 2-inch O.D. split-spoon drive sampler. The number of blows to drive the sampler a distance of three successive 6-inch intervals were recorded.

The well was installed by lowering a 2-inch diameter, schedule 40 PVC 10-slot screen and riser pipe through the center of the auger. A sand pack was installed around and above the screen as the auger was extracted. The well was finished by placing a hydrated bentonite chip and concrete seal above the sand pack and installing a flush-mounted cast-iron monument.

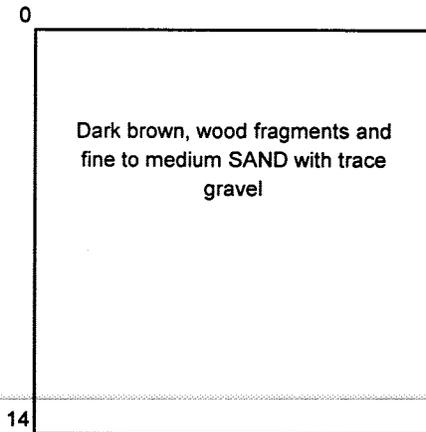
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**Dalton, Olmsted & Fuglevand, Inc.**  
 Environmental Consultants

**MONITORING WELL NO. DW-4(R) (replacement well for DW-4) - DESCRIPTION OF SAMPLES, TESTS, AND INSTALLATION**

Field Rep: T. Olmsted				Location: Southeast Corner of Property			
Drilling Co.: Holt Drilling				Elevation (Ft.)			
Driller: John Bennett				Date Completed: 5/16/97			
Drill Type: Mobile B-59				Weather: Clear & Warm			
Size/Type Casing: 4" I.D. Hollow-Stem Auger							
Spl.No.	Type:SPT (140# Hammer)	Drill Action	Spl Depth (Ft.) From - To	Blows/ 6 inches	Spl length inches	Time	Sample Description
7.5	SPT	Smooth with rough zones	7.5-8.5	6-20 (bouncing)	6	0945	Dark brown wood fragments and silty, fine to medium SAND with trace gravel
12.5	SPT	"	12.5-14	4-4-4	8	0950	Dark brown, wood fragments

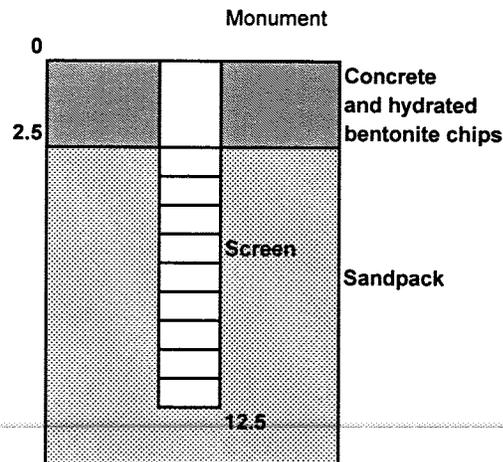
Depth(ft.) **SUMMARY LOG**



(Bottom of Boring)

NOTE: 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 (FT.)**

Riser Length: 2.5'	Seal: Bentonite/Concrete (top/bot) 0/25
Sandpack: 10-20 Sand (top/bot) 2.5/12.5	Monument: Steel - flush with ground surface
Screen: PVC/0.020" length 10 (top/bot) 2.5-12.5	

**TABLE 1 - Summary of Water Quality Data**

Bellefield Office Park  
Bellevue, Washington

Constituents/Well Nos.	DW-1	DW-1	DW-1	DW-1	DW-2	DW-2	DW-2	DW-2	DW-3	DW-3	DW-3	DW-3
Date	3/15/96	12/13/96	6/25/97	10/22/97	3/15/96	12/13/96	6/24/97	10/22/97	3/15/96	12/13/96	6/25/97	10/22/97
<b>Field Parameters</b>												
Water Level (Ft - Top of PVC casing)	3.74	3.38	2.80	3.45	2.10	2.95	1.18	2.45	1.18	2.00	0.20	1.55
Volume Purged (Liters)	7	22	20	20	60	22	23	22	8	22	27	24
pH	6.3	6.3	6.1	6.1	6.2	6.0	6.1	5.9	6.2	6.2	6.0	6.0
Conductivity (umhos)	607	840	920	972	440	555	687	624	507	670	682	751
Temperature (C)	14	13	18	18	11	12	16	17	11	12	15	16
Turbidity (NTU)	3.1	1.5	1.0	1.8	8.5	1.2	4.7	2.9	1.6	1.3	0.8	0.8
<b>Petroleum Hydrocarbons (mg/l)</b>												
Diesel Range (C12-C24)	<0.25	0.30	0.45	<0.25	<0.25	<0.25	0.29	<0.25	<0.25	0.38	0.34	<0.25
Heavy Oil Range (>C24)	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
<b>Polychlorinated Biphenyls (PCBs) - ug/l</b>												
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
<b>Polynuclear Aromatic Hydrocarbons (ug/l)</b>												
Acenaphthene	----	----	----	----	----	<1.0	<5.0	<1.0	----	----	----	----
Anthracene	----	----	----	----	----	<1.0	<5.0	<1.0	----	----	----	----
Benzo(a)anthracene	----	----	----	----	----	<1.0	<0.1	<0.1	----	----	----	----
Benzo(a)pyrene	----	----	----	----	----	<0.1	<0.1	<0.1	----	----	----	----
Benzo(b)fluoranthene	----	----	----	----	----	<0.1	<0.1	0.17	----	----	----	----
Benzo(g,h,i)perylene	----	----	----	----	----	<0.1	<0.1	<0.1	----	----	----	----
Benzo(k)fluoranthene	----	----	----	----	----	<0.1	<0.1	<0.1	----	----	----	----
Chrysene	----	----	----	----	----	<0.1	<0.1	0.22	----	----	----	----
Dibenzo(a,h)anthracene	----	----	----	----	----	<0.1	<0.1	0.29	----	----	----	----
Fluoranthene	----	----	----	----	----	<0.1	<0.1	<0.1	----	----	----	----
Fluorene	----	----	----	----	----	<1.0	0.80	<1.0	----	----	----	----
Indeno(1,2,3-cd)pyrene	----	----	----	----	----	<0.1	<0.1	<0.1	----	----	----	----
Naphthalene	----	----	----	----	----	<1.0	<5.0	<1.0	----	----	----	----
Phenanthrene	----	----	----	----	----	<1.0	<5.0	<1.0	----	----	----	----
Pyrene	----	----	----	----	----	<0.1	<0.1	<1.0	----	----	----	----

**TABLE 1 - Summary of Water Quality Data**

Bellefield Office Park  
Bellevue, Washington

Constituents/Well Nos.	DW-1	DW-1	DW-1	DW-1	DW-2	DW-2	DW-2	DW-2	DW-3	DW-3	DW-3	DW-3
Date	3/15/96	12/13/96	6/25/97	10/22/97	3/15/96	12/13/96	6/24/97	10/22/97	3/15/96	12/13/96	6/25/97	10/22/97
<b>Total Metals (ug/l)</b>												
Arsenic	<4	<4	<4	<4	<4	<4	<4	<4	<4	8.0	<4	<4
Cadmium	<5	----	----	----	<5	----	----	----	<5	----	----	----
Chromium	<10	----	----	----	<10	----	----	----	<10	----	----	----
Copper	<30	----	----	----	<30	----	----	----	<30	----	----	----
Iron	4000	----	----	----	19000	----	----	----	13000	----	----	----
Lead	7	28	19	4.3	14	3.6	24	3.4	3.4	29.5	<2	2.0
Manganese	1100	----	----	----	920	----	----	----	1600	----	----	----
Mercury	<1	----	----	----	<1	----	----	----	<1	----	----	----
Nickel	<30	----	----	----	<30	----	----	----	<30	----	----	----
Zinc	<20	<20	<20	<20	41	<20	27	<20	<20	22.2	<20	<20
<b>Dissolved Metals (ug/l)</b>												
Arsenic	<4	----	----	----	<4	----	----	----	4.2	----	----	----
Cadmium	<5	----	----	----	<5	----	----	----	<5	----	----	----
Chromium	<10	----	----	----	<10	----	----	----	<10	----	----	----
Copper	<30	----	----	----	<30	----	----	----	<30	----	----	----
Iron	4600	----	----	----	18000	----	----	----	13000	----	----	----
Lead	2.1	----	----	----	2.6	----	----	----	<2	----	----	----
Manganese	1400	----	----	----	1100	----	----	----	1800	----	----	----
Mercury	<1	----	----	----	<1	----	----	----	<1	----	----	----
Nickel	<30	----	----	----	<30	----	----	----	<30	----	----	----
Zinc	<20	----	----	----	<20	----	----	----	<20	----	----	----

Notes: ---- - not analyzed

**TABLE 1 - Summary of Water Quality Data**

Bellefield Office Park  
Bellevue, Washington

Constituents/Well Nos.	DW-4	DW-4(R)	DW-4(R)	DW-5	DW-5	DW-5	DW-6	DW-6	DW-6
Date	3/15/96	6/25/97	10/21/97	3/15/96	6/24/97	10/22/97	3/15/96	6/24/97	10/21/97
<b>Field Parameters</b>									
Water Level (Ft - Top of PVC casing)	1.74	0.90	2.22	2.53	1.10	2.42	1.45	0.25	1.53
Volume Purged (Liters)	8	23	22	7	27	22	28	27	22
pH	6.4	6.3	6.1	6.4	6.0	6.0	6.4	6.1	6.1
Conductivity (umohos)	648	724	530	450	498	630	694	800	860
Temperature (C)	11	15	16	9.5	15	17	10	14	14.5
Turbidity (NTU)	4.9	4.1	1.5	3.4	1.1	1.6	4.8	4.5	3.0
<b>Petroleum Hydrocarbons (mg/l)</b>									
Diesel Range (C12-C24)	<0.25	0.88	<0.25	<0.25	0.40	<0.25	<0.25	0.49	<0.25
Heavy Oil Range (>C24)	<0.75	0.83	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
<b>Polychlorinated Biphenyls (PCBs) -</b>									
PCB 1016	<0.1	<0.1	<0.1	<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	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1	<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	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1	<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	<0.1	<0.1	<0.1
PCB 1260	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>Polynuclear Aromatic Hydrocarbons</b>									
Acenaphthene	----	----	----	1.1	<5.0	1.5	----	----	----
Anthracene	----	----	----	<1.0	<5.0	<1.0	----	----	----
Benzo(a)anthracene	----	----	----	<1.0	<0.1	<0.1	----	----	----
Benzo(a)pyrene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Benzo(b)fluoranthene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Benzo(g,h,i)perylene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Benzo(k)fluoranthene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Chrysene	----	----	----	0.2	<0.1	<0.1	----	----	----
Dibenzo(a,h)anthracene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Fluoranthene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Fluorene	----	----	----	<1.0	0.66	<1.0	----	----	----
Indeno(1,2,3-cd)pyrene	----	----	----	<0.1	<0.1	<0.1	----	----	----
Naphthalene	----	----	----	<1.0	<5.0	<1.0	----	----	----
Phenanthrene	----	----	----	<1.0	<5.0	<1.0	----	----	----
Pyrene	----	----	----	0.11	<0.1	<1.0	----	----	----

**TABLE 1 - Summary of Water Quality Data**

Bellefield Office Park  
Bellevue, Washington

Constituents/Well Nos.	DW-4	DW-4(R)	DW-4(R)	DW-5	DW-5	DW-5	DW-6	DW-6	DW-6
Date	3/15/96	6/25/97	10/21/97	3/15/96	6/24/97	10/22/97	3/15/96	6/24/97	10/21/97
<b>Total Metals (ug/l)</b>									
Arsenic	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cadmium	<5	----	----	<5	----	----	<5	----	----
Chromium	<10	----	----	<10	----	----	<10	----	----
Copper	<30	----	----	<30	----	----	<30	----	----
Iron	9600	----	----	23000	----	----	29000	----	----
Lead	<5	4.8	<2	5.8	2.6	2.4	5.4	<2	2.7
Manganese	2500	----	----	900	----	----	1700	----	----
Mercury	<1	----	----	<1	----	----	<1	----	----
Nickel	<30	----	----	<30	----	----	<30	----	----
Zinc	21	<20	<20	68	30	24	25	<20	<20
<b>Dissolved Metals (ug/l)</b>									
Arsenic	<4	----	----	<4	----	----	<4	----	----
Cadmium	<5	----	----	<5	----	----	<5	----	----
Chromium	<10	----	----	<10	----	----	<10	----	----
Copper	<30	----	----	<30	----	----	<30	----	----
Iron	10000	----	----	22000	----	----	27000	----	----
Lead	<2	----	----	<2	----	----	<2	----	----
Manganese	3100	----	----	1100	----	----	1800	----	----
Mercury	<1	----	----	<1	----	----	<1	----	----
Nickel	<30	----	----	<30	----	----	<30	----	----
Zinc	<20	----	----	44	----	----	<20	----	----

Notes: ---- - not analyzed

**ATTACHMENT 2**  
**LABORATORY DATA SHEETS**  
**BELLEFIELD OFFICE PARK**  
**DECEMBER 1996 GROUND-WATER SAMPLING**

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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## ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
DW-1	B612286-01	Water	12/13/96
DW-3	B612286-02	Water	12/13/96

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

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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)  
 North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<b><u>B612286-01</u></b>			<b><u>Water</u></b>	
<b>Diesel Range Hydrocarbons</b>	1260376	12/16/96	12/18/96		0.250	<b>0.296</b>	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
<i>Surrogate: 2-FBP</i>	"	"	"	50.0-150		68.5	%	
				<b><u>B612286-02</u></b>			<b><u>Water</u></b>	
<b>Diesel Range Hydrocarbons</b>	1260376	12/16/96	12/18/96		0.250	<b>0.376</b>	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
<i>Surrogate: 2-FBP</i>	"	"	"	50.0-150		66.4	%	

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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### Metals by EPA 6010/7000 Series Methods North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
				<b><u>B612286-01</u></b>			<b><u>Water</u></b>	
<b><u>DW-1</u></b> Zinc	1260423	12/17/96	12/26/96	EPA 6010A	0.0200	ND	mg/l	
Arsenic	0170448	1/24/97	1/27/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	"	EPA 7421	0.00200	<b>0.0280</b>	"	
				<b><u>B612286-02</u></b>			<b><u>Water</u></b>	
<b><u>DW-3</u></b> Zinc	1260423	12/17/96	12/26/96	EPA 6010A	0.0200	<b>0.0222</b>	mg/l	
Arsenic	0170448	1/24/97	1/27/97	EPA 7060A	0.00400	<b>0.00800</b>	"	
Lead	"	"	"	EPA 7421	0.00200	<b>0.00295</b>	"	

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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**Polychlorinated Biphenyls by EPA Method 8081  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-3</b>				<b>B612286-02</b>			<b>Water</b>	
Aroclor 1016	1260437	12/17/96	12/19/96		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		61.6	%	

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)/Quality Control  
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1260376</b>		<b>Date Prepared: 12/16/96</b>		<b>Extraction Method: EPA 3520/600 Series</b>					
<b>Blank</b>		<b>1260376-BLK1</b>							
Diesel Range Hydrocarbons	12/18/96			ND	mg/l	0.250			
Heavy Oil Range Hydrocarbons	"			ND	"	0.750			
Surrogate: 2-FBP	"	0.344		0.256	"	50.0-150	74.4		
<b>LCS</b>		<b>1260376-BS1</b>							
Diesel Range Hydrocarbons	12/18/96	2.04		1.93	mg/l	52.0-131	94.6		
Surrogate: 2-FBP	"	0.344		0.246	"	50.0-150	71.5		
<b>Duplicate</b>		<b>1260376-DUP1</b>		<b>B612228-01</b>					
Diesel Range Hydrocarbons	12/18/96		ND	ND	mg/l			44.0	1
Surrogate: 2-FBP	"	0.687		0.569	"	50.0-150	82.8		
<b>Duplicate</b>		<b>1260376-DUP2</b>		<b>B612264-01</b>					
Diesel Range Hydrocarbons	12/18/96		ND	ND	mg/l			44.0	1
Surrogate: 2-FBP	"	0.648		0.428	"	50.0-150	66.0		

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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**Metals by EPA 6010/7000 Series Methods/Quality Control  
 North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0170448</b>			<b>Date Prepared: 1/24/97</b>			<b>Extraction Method: EPA 3020</b>				
<b>Blank</b>			<b>0170448-BLK1</b>							
Arsenic	1/27/97			ND	mg/l	0.00400				
Lead	"			ND	"	0.00200				
<b>LCS</b>			<b>0170448-BS1</b>							
Arsenic	1/27/97	0.0500		0.0631	mg/l	75.0-125	126			2
Lead	"	0.0250		0.0246	"	75.0-125	98.4			
<b>Duplicate</b>			<b>0170448-DUP1 B612286-01</b>							
Arsenic	1/27/97		ND	0.00550	mg/l			20.0		1
Lead	"		0.0280	0.0271	"			20.0	3.27	
<b>Matrix Spike</b>			<b>0170448-MS1 B612286-01</b>							
Arsenic	1/27/97	0.0500	ND	0.0584	mg/l	70.0-130	117			
Lead	"	0.0250	0.0280	0.0520	"	70.0-130	96.0			
<b>Matrix Spike Dup</b>			<b>0170448-MSD1 B612286-01</b>							
Arsenic	1/27/97	0.0500	ND	0.0586	mg/l	70.0-130	117	20.0	0	
Lead	"	0.0250	0.0280	0.0534	"	70.0-130	102	20.0	6.06	
<b>Batch: 1260423</b>			<b>Date Prepared: 12/17/96</b>			<b>Extraction Method: EPA 3010</b>				
<b>Blank</b>			<b>1260423-BLK1</b>							
Zinc	12/26/96			ND	mg/l	0.0200				
<b>LCS</b>			<b>1260423-BS1</b>							
Zinc	12/26/96	1.00		0.893	mg/l	80.0-120	89.3			
<b>Duplicate</b>			<b>1260423-DUP1 B612256-01</b>							
Zinc	12/26/96		0.306	0.307	mg/l			20.0	0.326	
<b>Matrix Spike</b>			<b>1260423-MS1 B612256-01</b>							
Zinc	12/26/96	1.00	0.306	1.12	mg/l	80.0-120	81.4			
<b>Matrix Spike Dup</b>			<b>1260423-MSD1 B612256-01</b>							
Zinc	12/26/96	1.00	0.306	1.13	mg/l	80.0-120	82.4	20.0	1.22	

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\*Refer to end of report for text of notes and definitions.

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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**Polychlorinated Biphenyls by EPA Method 8081/Quality Control  
 North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1260437</b>			<b>Date Prepared: 12/17/96</b>			<b>Extraction Method: EPA 3520/600 Series</b>				
<b>Blank</b>			<b>1260437-BLK1</b>							
Aroclor 1016	12/19/96			ND	ug/l	0.100				
Aroclor 1221	"			ND	"	0.100				
Aroclor 1232	"			ND	"	0.100				
Aroclor 1242	"			ND	"	0.100				
Aroclor 1248	"			ND	"	0.100				
Aroclor 1254	"			ND	"	0.100				
Aroclor 1260	"			ND	"	0.100				
Surrogate: TCX	"	0.200		0.150	"	40.0-130	75.0			
<b>LCS</b>			<b>1260437-BS1</b>							
Aroclor 1260	12/19/96	10.0		6.84	ug/l	33.0-122	68.4			
Surrogate: TCX	"	0.200		0.154	"	40.0-130	77.0			
<b>LCS Dup</b>			<b>1260437-BSD1</b>							
Aroclor 1260	12/19/96	10.0		7.12	ug/l	33.0-122	71.2	21.0	4.01	
Surrogate: TCX	"	0.200		0.152	"	40.0-130	76.0			

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/13/96 Received: 12/14/96 Reported: 1/27/97 16:54
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**Notes and Definitions**

#	Note
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- 1      Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.
- 2      The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- DET    Analyte DETECTED
- ND     Analyte NOT DETECTED at or above the reporting limit
- NR     Not Reported
- dry    Sample results reported on a dry weight basis
- Recov.    Recovery
- RPD    Relative Percent Difference

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Dalton, Olmstead and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/16/96 Received: 12/16/96 Reported: 1/3/97 16:30
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**ANALYTICAL REPORT FOR SAMPLES:**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
DW-2	B612306-01	Water	12/16/96

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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>DW-2</u>				<u>B612306-01</u>			<u>Water</u>	
Diesel Range Hydrocarbons	1260376	12/16/96	12/23/96		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		68.5	%	

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*\*Refer to end of report for text of notes and definitions.*

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Dalton, Olmstead and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/16/96 Received: 12/16/96 Reported: 1/3/97 16:30
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**Metals by EPA 200 Series Methods  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>DW-2</u>				<u>B612306-01</u>			<u>Water</u>	
Zinc	1260456	12/18/96	1/3/97	EPA 200.7	0.0200	ND	mg/l	
Arsenic	1260424	12/17/96	12/18/96	EPA 206.2	0.00400	ND	"	
Lead	"	"	"	EPA 239.2	0.00200	<b>0.00361</b>	"	

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Dalton, Olmstead and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/16/96 Received: 12/16/96 Reported: 1/3/97 16:30
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up/Quality Control  
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1260376</b>			<b>Date Prepared: 12/16/96</b>			<b>Extraction Method: EPA 3520/600 Series</b>				
<b>Blank</b>			<b>1260376-BLK1</b>							
Diesel Range Hydrocarbons	12/23/96			ND	mg/l	0.250				
Heavy Oil Range Hydrocarbons	"			ND	"	0.750				
Surrogate: 2-FBP	"	0.344		0.216	"	50.0-150	62.8			
<b>LCS</b>			<b>1260376-BS1</b>							
Diesel Range Hydrocarbons	12/23/96	2.04		1.51	mg/l	54.0-121	74.0			
Surrogate: 2-FBP	"	0.344		0.209	"	50.0-150	60.8			
<b>Duplicate</b>			<b>1260376-DUP1 B612228-01</b>							
Diesel Range Hydrocarbons	12/23/96		ND	ND	mg/l			44.0		n/a
Surrogate: 2-FBP	"	0.687		0.413	"	50.0-150	60.1			

*Laura Dutton*



# NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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Dalton, Olmstead and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/16/96 Received: 12/16/96 Reported: 1/3/97 16:30
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**Metals by EPA 200 Series Methods/Quality Control  
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1260424</b>			<b>Date Prepared: 12/17/96</b>			<b>Extraction Method: EPA 3020</b>				
<b>Blank</b>			<b>1260424-BLK1</b>							
Arsenic	12/18/96			ND	mg/l	0.00400				
Lead	"			ND	"	0.00200				
<b>LCS</b>			<b>1260424-BS1</b>							
Arsenic	12/18/96	0.0500		0.0504	mg/l	70.0-130	101			
Lead	"	0.0250		0.0234	"	70.0-130	93.6			
<b>Duplicate</b>			<b>1260424-DUP1</b>		<b>B612280-01</b>					
Arsenic	12/18/96		0.0105	0.0111	mg/l			20.0	5.56	
Lead	"		ND	ND	"			20.0	n/a	
<b>Matrix Spike</b>			<b>1260424-MS1</b>		<b>B612280-01</b>					
Arsenic	12/18/96	0.0500	0.0105	0.0606	mg/l	75.0-125	100			
Lead	"	0.0250	ND	0.0245	"	75.0-125	98.0			
<b>Matrix Spike Dup</b>			<b>1260424-MSD1</b>		<b>B612280-01</b>					
Arsenic	12/18/96	0.0500	0.0105	0.0607	mg/l	75.0-125	100	20.0	0	
Lead	"	0.0250	ND	0.0248	"	75.0-125	99.2	20.0	1.22	
<b>Batch: 1260456</b>			<b>Date Prepared: 12/18/96</b>			<b>Extraction Method: EPA 200 Series</b>				
<b>Blank</b>			<b>1260456-BLK1</b>							
Zinc	1/3/97			ND	mg/l	0.0200				
<b>LCS</b>			<b>1260456-BS1</b>							
Zinc	1/3/97	0.0250		0.0288	mg/l	70.0-130	115			
<b>Duplicate</b>			<b>1260456-DUP1</b>		<b>B612314-01</b>					
Zinc	1/3/97		0.0321	0.0302	mg/l			20.0	6.10	
<b>Matrix Spike</b>			<b>1260456-MS1</b>		<b>B612314-01</b>					
Zinc	1/3/97	0.0250	0.0321	0.0562	mg/l	75.0-125				1
<b>Matrix Spike Dup</b>			<b>1260456-MSD1</b>		<b>B612314-01</b>					
Zinc	1/3/97	0.0250	0.0321	0.0729	mg/l	75.0-125		20.0		1

North Creek Analytical, Inc.

\*Refer to end of report for text of notes and definitions.

*Laura Dutton*

Laura L Dutton, Project Manager

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# NORTH CREEK ANALYTICAL

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Dalton, Olmstead and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/16/96 Received: 12/16/96 Reported: 1/3/97 16:30
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**Polynuclear Aromatic Compounds by EPA Method 8310/Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1260480</b>		<b>Date Prepared: 12/18/96</b>		<b>Extraction Method: EPA 3520/600 Series</b>						
<b>Blank</b>		<b>1260480-BLK1</b>								
Acenaphthene	12/31/96			ND	ug/l	1.00				
Acenaphthylene	"			ND	"	1.00				
Anthracene	"			ND	"	1.00				
Benzo (a) anthracene	"			ND	"	0.100				
Benzo (a) pyrene	"			ND	"	0.100				
Benzo (b) fluoranthene	"			ND	"	0.100				
Benzo (ghi) perylene	"			ND	"	0.100				
Benzo (k) fluoranthene	"			ND	"	0.100				
Chrysene	"			ND	"	0.100				
Dibenzo (a,h) anthracene	"			ND	"	0.100				
Fluoranthene	"			ND	"	0.100				
Fluorene	"			ND	"	1.00				
Indeno (1,2,3-cd) pyrene	"			ND	"	0.100				
Naphthalene	"			ND	"	1.00				
Phenanthrene	"			ND	"	1.00				
Pyrene	"			ND	"	0.100				
<i>Surrogate: 2-FBP</i>	"	51.0		46.1	"	22.0-129	90.4			
<b>LCS</b>		<b>1260480-BS1</b>								
Chrysene	12/31/96	10.0		5.22	ug/l	16.0-113	52.2			
Fluorene	"	10.0		5.91	"	19.0-124	59.1			
Indeno (1,2,3-cd) pyrene	"	10.0		6.95	"	15.0-137	69.5			
<i>Surrogate: 2-FBP</i>	"	51.0		40.8	"	22.0-129	80.0			
<b>LCS Dup</b>		<b>1260480-BSD1</b>								
Chrysene	12/31/96	10.0		5.57	ug/l	16.0-113	55.7	27.0	6.49	
Fluorene	"	10.0		6.38	"	19.0-124	63.8	39.0	7.65	
Indeno (1,2,3-cd) pyrene	"	10.0		7.80	"	15.0-137	78.0	28.0	11.5	
<i>Surrogate: 2-FBP</i>	"	51.0		40.9	"	22.0-129	80.2			

*Laura Dutton*

Dalton, Olmstead and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Spieker Properties - BA Prop. Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 12/16/96 Received: 12/16/96 Reported: 1/3/97 16:30
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**Notes and Definitions**

#	Note
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- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- Recov. Recovery
- RPD Relative Percent Difference
- 1 The percent recovery/ RPD for this QC sample is unavailable due to high concentration of analyte already present in the sample.

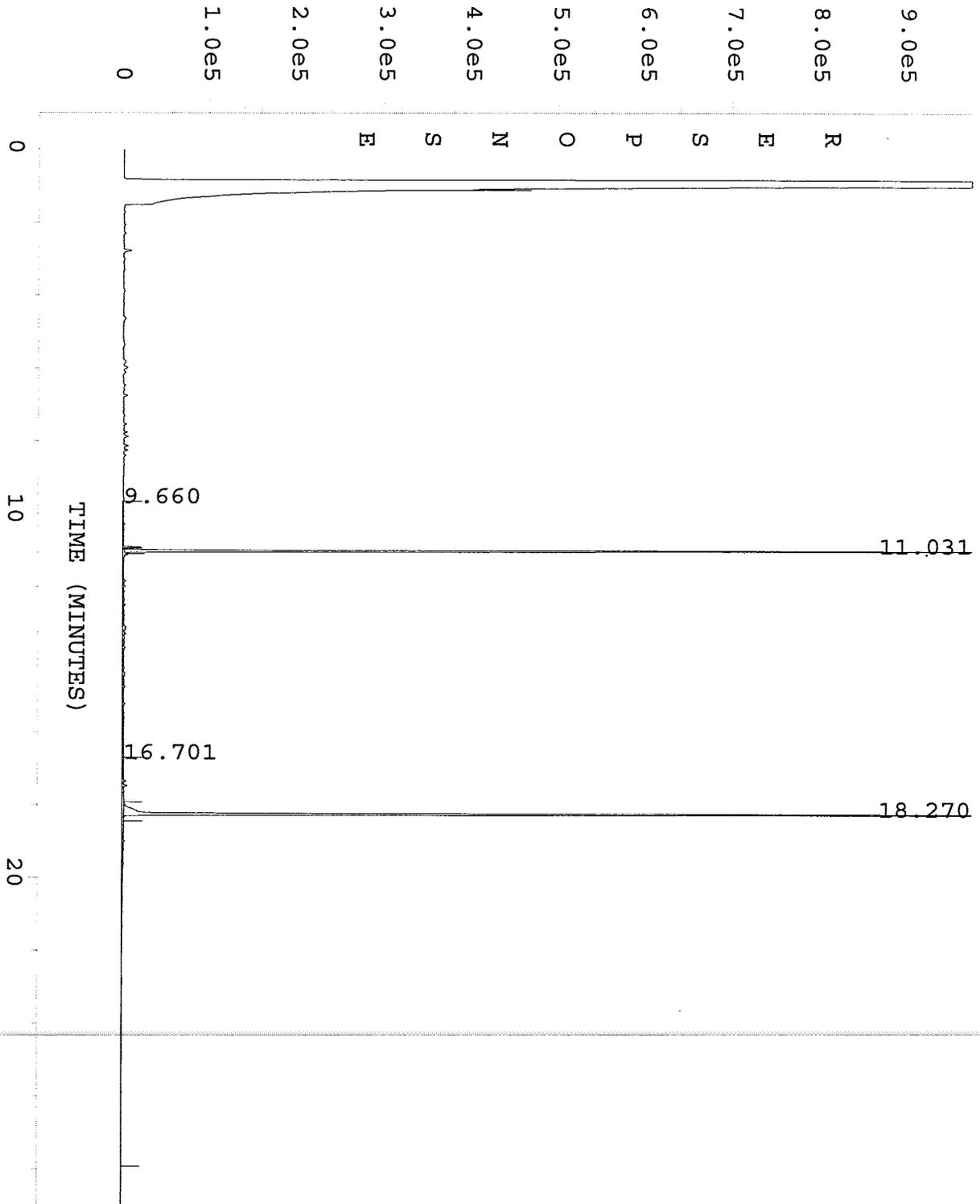
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Laura L Dutton, Project Manager

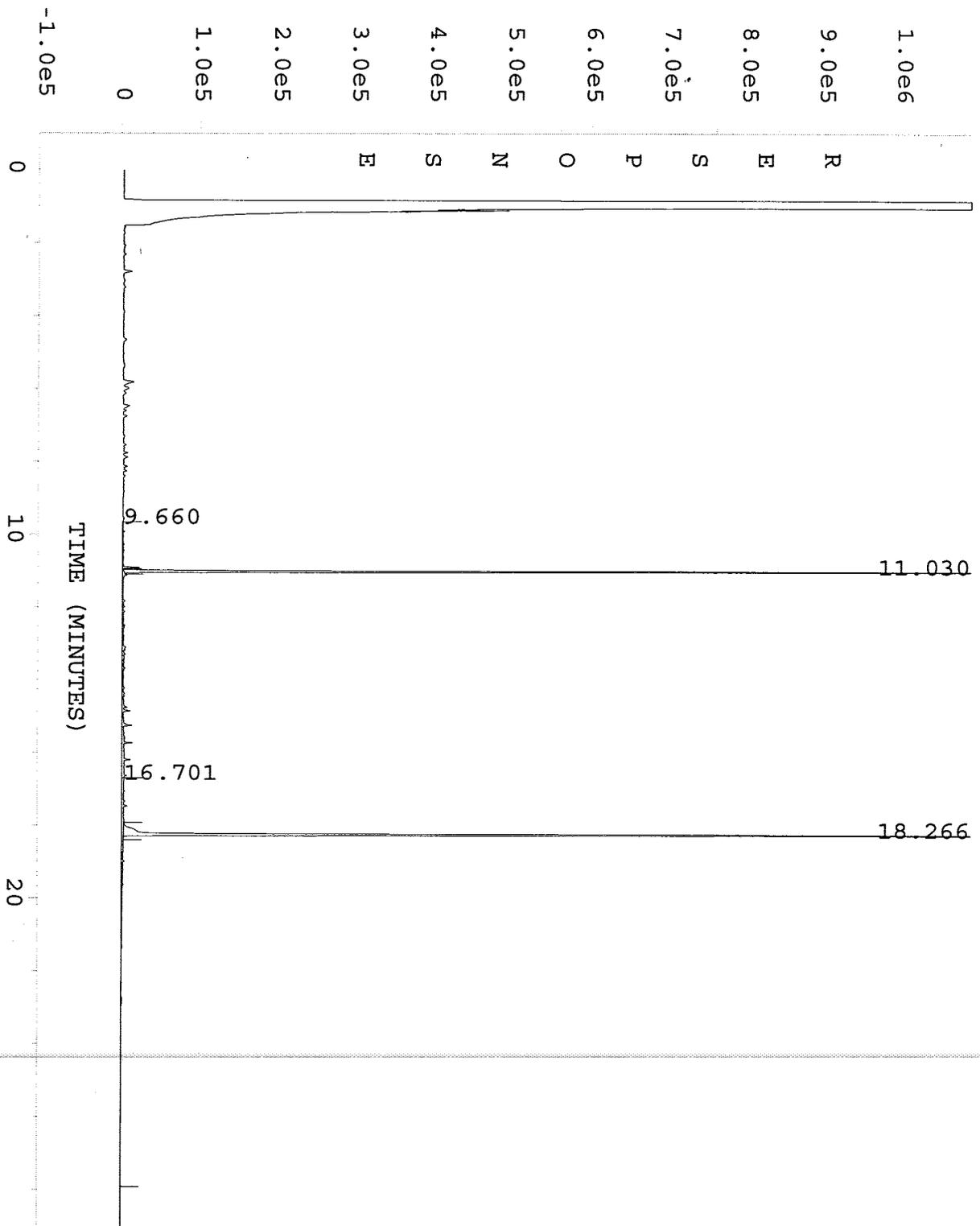
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user modified

Data File Name : C:\HPCHEM\1\DATA\DEC23\052R0401.D  
 Operator : TF  
 Instrument : PHIL  
 Sample Name : 1260376-BLK W SG  
 Run Time Bar Code:  
 Acquired on : 23 Dec 96 05:32 PM  
 Report Created on: 24 Dec 96 09:20 AM

Page Number : 1  
 Vial Number : 52  
 Injection Number : 1  
 Sequence Line : 4  
 Instrument Method: TPHE.MTH  
 Analysis Method : TPHE.MTH



user modified

Data File Name	: C:\HPCHEM\1\DATA\DEC23\056R0401.D	Page Number	: 1
Operator	: TF	Vial Number	: 56
Instrument	: PHIL	Injection Number	: 1
Sample Name	: 612306-01 W SG	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	TPHE.MTH
Acquired on	: 23 Dec 96 07:59 PM	Analysis Method	: TPHE.MTH
Report Created on:	24 Dec 96 09:28 AM		



# CHAIN OF CUSTODY REPORT

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 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

Work Order # **B612306**

REPORT TO: <b>DOF</b>			INVOICE TO:		
ATTENTION: <b>M. Dalton</b>			ATTENTION:		
ADDRESS:			ADDRESS:		
PHONE: <b>486-7905</b> FAX: <b>486-7657</b>			P.O. NUMBER: NCA QUOTE #:		
PROJECT NAME: <b>Spitzer Prop</b>			Analysis Request: <b>WPH-DX</b> <b>Merck Pb, As, Zn</b> <b>PHK-8310</b>		
PROJECT NUMBER: <b>HEW-020</b>					
SAMPLED BY: <b>T. Olmsted</b>					
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)			
1. <b>DW-2</b>	<b>12/16/06 1115</b>	<b>B612306-01</b>	X	X	X
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

**TURNAROUND REQUEST in Business Days \***

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

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

OTHER Specify: \_\_\_\_\_

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

MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
<b>W</b>	<b>3</b>	

RELINQUISHED BY (Signature): <b>T. Olmsted</b>	DATE: <b>12/16/06</b>	RECEIVED BY (Signature): <b>BG Kelley</b>	DATE: <b>12/16/06</b>
PRINT NAME: <b>[Signature]</b>	FIRM: <b>DOF</b>	PRINT NAME: <b>BG Kelley</b>	FIRM: <b>NCA</b>
RELINQUISHED BY (Signature):	DATE:	RECEIVED BY (Signature):	DATE:
PRINT NAME:	FIRM:	PRINT NAME:	FIRM:
TIME:	TIME:	TIME:	TIME:

**ATTACHMENT 3  
LABORATORY DATA SHEETS  
BELLEFIELD OFFICE PARK  
JUNE 1997 GROUND-WATER SAMPLING**

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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**ANALYTICAL REPORT FOR SAMPLES:**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
DW-1	B706607-01	Water	6/25/97
DW-2	B706607-02	Water	6/1/97
DW-2	B706607-02	Water	6/24/97
DW-3	B706607-03	Water	6/25/97
DW-4(12)	B706607-04	Water	6/25/97
DW-5	B706607-05	Water	6/1/97
DW-5	B706607-05	Water	6/24/97
DW-6	B706607-06	Water	6/24/97

*Laura Dutton*



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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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## Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-1</b>								
				<b><u>B706607-01</u></b>				
Diesel Range Hydrocarbons	0670809	6/26/97	6/27/97		0.250	0.451	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		91.4	%	
<b>DW-2</b>								
				<b><u>B706607-02</u></b>				
Diesel Range Hydrocarbons	0670809	6/26/97	6/27/97		0.250	0.293	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		81.2	%	
<b>DW-3</b>								
				<b><u>B706607-03</u></b>				
Diesel Range Hydrocarbons	0670809	6/26/97	6/27/97		0.250	0.337	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		83.6	%	
<b>DW-4 (R)</b>								
				<b><u>B706607-04</u></b>				
Diesel Range Hydrocarbons	0670809	6/26/97	6/30/97		0.250	0.880	mg/l	1
Heavy Oil Range Hydrocarbons	"	"	"		0.750	0.828	"	
Surrogate: 2-FBP	"	"	"	50.0-150		92.1	%	
<b>DW-5</b>								
				<b><u>B706607-05</u></b>				
Diesel Range Hydrocarbons	0670809	6/26/97	6/27/97		0.250	0.403	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		86.7	%	
<b>DW-6</b>								
				<b><u>B706607-06</u></b>				
Diesel Range Hydrocarbons	0670809	6/26/97	6/28/97		0.250	0.494	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		83.9	%	

*Laura Dutton*

Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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**Total Metals by EPA 6000/7000 Series Methods  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
				<b><u>B706607-01</u></b>				<b><u>Water</u></b>
Zinc	0670919	6/30/97	6/30/97	EPA 6010A	0.0200	ND	mg/l	
Arsenic	0770200	7/7/97	7/8/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	7/7/97	EPA 7421	0.00200	<b>0.0191</b>	"	
				<b><u>B706607-02</u></b>				<b><u>Water</u></b>
Zinc	0670919	6/30/97	6/30/97	EPA 6010A	0.0200	<b>0.0268</b>	mg/l	
Arsenic	0770200	7/7/97	7/8/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	7/7/97	EPA 7421	0.00200	<b>0.0235</b>	"	
				<b><u>B706607-03</u></b>				<b><u>Water</u></b>
Zinc	0670919	6/30/97	6/30/97	EPA 6010A	0.0200	ND	mg/l	
Arsenic	0770200	7/7/97	7/8/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	7/7/97	EPA 7421	0.00200	ND	"	
				<b><u>B706607-04</u></b>				<b><u>Water</u></b>
Zinc	0670919	6/30/97	6/30/97	EPA 6010A	0.0200	ND	mg/l	
Arsenic	0770200	7/7/97	7/8/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	7/7/97	EPA 7421	0.00200	<b>0.00483</b>	"	
				<b><u>B706607-05</u></b>				<b><u>Water</u></b>
Zinc	0670919	6/30/97	6/30/97	EPA 6010A	0.0200	<b>0.0302</b>	mg/l	
Arsenic	0770200	7/7/97	7/8/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	7/7/97	EPA 7421	0.00200	<b>0.00258</b>	"	
				<b><u>B706607-06</u></b>				<b><u>Water</u></b>
Zinc	0670919	6/30/97	6/30/97	EPA 6010A	0.0200	ND	mg/l	
Arsenic	0770200	7/7/97	7/8/97	EPA 7060A	0.00400	ND	"	
Lead	"	"	7/7/97	EPA 7421	0.00200	ND	"	

*Laura Dutton*



**NORTH  
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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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**Polychlorinated Biphenyls by EPA Method 8081**  
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-3</b>				<b><u>B706607-03</u></b>			<b><u>Water</u></b>	<b><u>2,3</u></b>
Aroclor 1016	0670933	6/30/97	7/8/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		105	%	
<b>DW-4 (R)</b>				<b><u>B706607-04</u></b>			<b><u>Water</u></b>	<b><u>2,3</u></b>
Aroclor 1016	0670933	6/30/97	7/8/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		109	%	
<b>DW-5</b>				<b><u>B706607-05</u></b>			<b><u>Water</u></b>	<b><u>2,3</u></b>
Aroclor 1016	0670933	6/30/97	7/8/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		110	%	
<b>DW-6</b>				<b><u>B706607-06</u></b>			<b><u>Water</u></b>	<b><u>2,3</u></b>
Aroclor 1016	0670933	6/30/97	7/8/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	

North Creek Analytical, Inc.

\*Refer to end of report for text of notes and definitions.

*Laura Dutton*

Laura L Dutton, Director, Analytical Services

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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**Polychlorinated Biphenyls by EPA Method 8081**  
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-6 (continued)</b>				<b>B706607-06</b>			<b>Water</b>	<b>2.3</b>
Aroclor 1232	0670933	6/30/97	7/8/97		0.100	ND	ug/l	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		104	%	

\*Refer to end of report for text of notes and definition.

North Creek Analytical, Inc.

*Laura Dutton*  
Laura L Dutton, Director, Analytical Services

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# NORTH CREEK ANALYTICAL

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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### Polynuclear Aromatic Compounds per EPA Method 8310 North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-2</b>				<b>B706607-02</b>			<b>Water</b>	
Acenaphthene	0770127	6/30/97	7/7/97		5.00	ND	ug/l	
Acenaphthylene	"	"	"		5.00	ND	"	
Anthracene	"	"	"		5.00	ND	"	
Benzo (a) anthracene	"	"	"		0.100	ND	"	
Benzo (a) pyrene	"	"	"		0.100	ND	"	
Benzo (b) fluoranthene	"	"	"		0.100	ND	"	
Benzo (ghi) perylene	"	"	"		0.100	ND	"	
Benzo (k) fluoranthene	"	"	"		0.100	ND	"	
Chrysene	"	"	"		0.100	ND	"	
Dibenzo (a,h) anthracene	"	"	"		0.100	ND	"	
Fluoranthene	"	"	"		0.100	ND	"	
<b>Fluorene</b>	"	"	"		0.500	<b>0.796</b>	"	
Indeno (1,2,3-cd) pyrene	"	"	"		0.100	ND	"	
Naphthalene	"	"	"		5.00	ND	"	
Phenanthrene	"	"	"		5.00	ND	"	
Pyrene	"	"	"		0.100	ND	"	
Surrogate: 9,10-Diphenylanthracene	"	"	"	40.0-140		68.8	%	
<b>DW-5</b>				<b>B706607-05</b>			<b>Water</b>	
Acenaphthene	0770127	6/30/97	7/7/97		5.00	ND	ug/l	
Acenaphthylene	"	"	"		5.00	ND	"	
Anthracene	"	"	"		5.00	ND	"	
Benzo (a) anthracene	"	"	"		0.100	ND	"	
Benzo (a) pyrene	"	"	"		0.100	ND	"	
Benzo (b) fluoranthene	"	"	"		0.100	ND	"	
Benzo (ghi) perylene	"	"	"		0.100	ND	"	
Benzo (k) fluoranthene	"	"	"		0.100	ND	"	
Chrysene	"	"	"		0.100	ND	"	
Dibenzo (a,h) anthracene	"	"	"		0.100	ND	"	
Fluoranthene	"	"	"		0.100	ND	"	
<b>Fluorene</b>	"	"	"		0.500	<b>0.662</b>	"	
Indeno (1,2,3-cd) pyrene	"	"	"		0.100	ND	"	
Naphthalene	"	"	"		5.00	ND	"	
Phenanthrene	"	"	"		5.00	ND	"	
Pyrene	"	"	"		0.100	ND	"	
Surrogate: 9,10-Diphenylanthracene	"	"	"	40.0-140		75.4	%	

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\*Refer to end of report for text of notes and definitions.

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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## Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0670809</b>			<b>Date Prepared: 6/26/97</b>			<b>Extraction Method: EPA 3520/600 Series</b>				
<b>Blank</b>			<b>0670809-BLK1</b>							
Diesel Range Hydrocarbons	6/27/97			ND	mg/l	0.250				
Heavy Oil Range Hydrocarbons	"			ND	"	0.750				
Surrogate: 2-FBP	"	0.350		0.279	"	50.0-150	79.7			
<b>LCS</b>			<b>0670809-BS1</b>							
Diesel Range Hydrocarbons	6/27/97	2.04		2.00	mg/l	52.0-131	98.0			
Surrogate: 2-FBP	"	0.350		0.304	"	50.0-150	86.9			
<b>Duplicate</b>			<b>0670809-DUP1 B706607-01</b>							
Diesel Range Hydrocarbons	6/27/97		0.451	0.347	mg/l			44.0		4
Surrogate: 2-FBP	"	0.661		0.560	"	50.0-150	84.7			
<b>Duplicate</b>			<b>0670809-DUP2 B706609-01</b>							
Diesel Range Hydrocarbons	6/27/97		0.265	ND	mg/l			44.0		
Surrogate: 2-FBP	"	0.667		0.477	"	50.0-150	71.5			

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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## Total Metals by EPA 6000/7000 Series Methods/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0670919</b>			<b>Date Prepared: 6/30/97</b>			<b>Extraction Method: EPA 3010</b>				
<b>Blank</b>			<b>0670919-BLK1</b>							
Zinc	6/30/97			ND	mg/l	0.0200				
<b>LCS</b>			<b>0670919-BS1</b>							
Zinc	6/30/97	1.00		0.957	mg/l	80.0-120	95.7			
<b>Duplicate</b>			<b>0670919-DUP1 B706476-01</b>							
Zinc	6/30/97		167	167	mg/l			20.0	0	
<b>Matrix Spike</b>			<b>0670919-MS1 B706476-01</b>							
Zinc	6/30/97	1.00	167	165	mg/l	80.0-120	NR			5
<b>Matrix Spike</b>			<b>0670919-MS2 B706476-01</b>							
Zinc	6/30/97	2.00	167	160	mg/l	80.0-120	NR			5
<b>Matrix Spike Dup</b>			<b>0670919-MSD1 B706476-01</b>							
Zinc	6/30/97	1.00	167	161	mg/l	80.0-120	NR	20.0		5
<b>Batch: 0770200</b>			<b>Date Prepared: 7/7/97</b>			<b>Extraction Method: EPA 3020</b>				
<b>Blank</b>			<b>0770200-BLK1</b>							
Arsenic	7/8/97			ND	mg/l	0.00400				
Lead	7/7/97			ND	"	0.00200				
<b>LCS</b>			<b>0770200-BS1</b>							
Arsenic	7/8/97	0.0500		0.0484	mg/l	75.0-125	96.8			
Lead	7/7/97	0.0260		0.0257	"	75.0-125	98.8			
<b>Duplicate</b>			<b>0770200-DUP1 B706605-01</b>							
Arsenic	7/8/97		ND	ND	mg/l			20.0		
Lead	7/7/97		ND	ND	"			20.0		
<b>Matrix Spike</b>			<b>0770200-MS1 B706605-01</b>							
Arsenic	7/8/97	0.0500	ND	0.0450	mg/l	70.0-130	90.0			
Lead	7/7/97	0.0260	ND	0.0269	"	70.0-130	103			
<b>Matrix Spike Dup</b>			<b>0770200-MSD1 B706605-01</b>							
Arsenic	7/8/97	0.0500	ND	0.0486	mg/l	70.0-130	97.2	20.0	7.69	
Lead	7/7/97	0.0260	ND	0.0281	"	70.0-130	108	20.0	4.74	

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\*Refer to end of report for text of notes and definitions.

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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## Polychlorinated Biphenyls by EPA Method 8081/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0670933</b>									
<b>Blank</b>									
<b>Date Prepared: 6/30/97</b>									
<b>Extraction Method: EPA 3520/600 Series</b>									
Aroclor 1016	7/2/97			ND	ug/l	0.100			2,3
Aroclor 1221	"			ND	"	0.100			
Aroclor 1232	"			ND	"	0.100			
Aroclor 1242	"			ND	"	0.100			
Aroclor 1248	"			ND	"	0.100			
Aroclor 1254	"			ND	"	0.100			
Aroclor 1260	"			ND	"	0.100			
Aroclor 1262	"			ND	"	0.100			
Aroclor 1268	"			ND	"	0.100			
Surrogate: TCX	"	0.200		0.190	"	40.0-130	95.0		
<b>LCS</b>									
<b>0670933-BS1</b>									
Aroclor 1260	7/2/97	10.0		9.06	ug/l	33.0-122	90.6		2,3
Surrogate: TCX	"	0.200		0.216	"	40.0-130	108		
<b>LCS Dup</b>									
<b>0670933-BSD1</b>									
Aroclor 1260	7/2/97	10.0		9.15	ug/l	33.0-122	91.5	21.0	0.988
Surrogate: TCX	"	0.200		0.200	"	40.0-130	100		

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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## Polynuclear Aromatic Compounds per EPA Method 8310/Quality Control North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0770127</b>			<b>Date Prepared: 6/30/97</b>		<b>Extraction Method: EPA 3520/600 Series</b>					
<b>Blank</b>			<b>0770127-BLK1</b>							
Acenaphthene	7/7/97			ND	ug/l	5.00				
Acenaphthylene	"			ND	"	5.00				
Anthracene	"			ND	"	5.00				
Benzo (a) anthracene	"			ND	"	0.100				
Benzo (a) pyrene	"			ND	"	0.100				
Benzo (b) fluoranthene	"			ND	"	0.100				
Benzo (ghi) perylene	"			ND	"	0.100				
Benzo (k) fluoranthene	"			ND	"	0.100				
Chrysene	"			ND	"	0.100				
Dibenzo (a,h) anthracene	"			ND	"	0.100				
Fluoranthene	"			ND	"	0.100				
Fluorene	"			ND	"	0.500				
Indeno (1,2,3-cd) pyrene	"			ND	"	0.100				
Naphthalene	"			ND	"	5.00				
Phenanthrene	"			ND	"	5.00				
Pyrene	"			ND	"	0.100				
Surrogate: 9,10-Diphenylanthracene	"	5.16		5.28	"	40.0-140	102			
<b>LCS</b>			<b>0770127-BS1</b>							
Acenaphthylene	7/7/97	10.0		9.77	ug/l	20.0-124	97.7			
Benzo (k) fluoranthene	"	10.0		8.48	"	20.0-159	84.8			
Pyrene	"	10.0		8.87	"	50.0-150	88.7			
Surrogate: 9,10-Diphenylanthracene	"	5.16		4.99	"	40.0-140	96.7			
<b>LCS Dup</b>			<b>0770127-BSD1</b>							
Acenaphthylene	7/7/97	10.0		9.60	ug/l	20.0-124	96.0	50.0	1.76	
Benzo (k) fluoranthene	"	10.0		8.38	"	20.0-159	83.8	50.0	1.19	
Pyrene	"	10.0		8.74	"	50.0-150	87.4	50.0	1.48	
Surrogate: 9,10-Diphenylanthracene	"	5.16		5.24	"	40.0-140	102			

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Mathew Dalton	Sampled: 6/25/97 to 6/24/97 Received: 6/25/97 Reported: 7/29/97 14:29
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**Notes and Definitions**

#	Note
1	This sample appears to contain volatile range organics.
2	To reduce matrix interference, the sample extract has undergone copper clean-up, method 3660, which is specific to sulfur contamination.
3	To reduce matrix interference, the sample extract has undergone sulfuric acid clean-up, method 3665, which is specific to hydrocarbon contamination.
4	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.
5	Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

North Creek Analytical, Inc.



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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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## ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
DW-1	B710410-01	Water	10/22/97
DW-2	B710410-02	Water	10/22/97
DW-3	B710410-03	Water	10/22/97
DW-4(R)	B710410-04	Water	10/21/97
DW-5	B710410-05	Water	10/22/97
DW-6	B710410-06	Water	10/21/97

North Creek Analytical, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document.  
 This analytical report must be reproduced in its entirety.*

  
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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-1</b>				<b><u>B710410-01</u></b>			<b><u>Water</u></b>	
Diesel Range Hydrocarbons	1070686	10/27/97	10/28/97		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		80.6	%	
<b>DW-2</b>				<b><u>B710410-02</u></b>			<b><u>Water</u></b>	
Diesel Range Hydrocarbons	1070686	10/27/97	10/28/97		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		78.7	%	
<b>DW-3</b>				<b><u>B710410-03</u></b>			<b><u>Water</u></b>	
Diesel Range Hydrocarbons	1070686	10/27/97	10/28/97		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		78.4	%	
<b>DW-4 (P)</b>				<b><u>B710410-04</u></b>			<b><u>Water</u></b>	
Diesel Range Hydrocarbons	1070686	10/27/97	10/28/97		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		78.4	%	
<b>DW-5</b>				<b><u>B710410-05</u></b>			<b><u>Water</u></b>	
Diesel Range Hydrocarbons	1070686	10/27/97	10/28/97		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		79.0	%	
<b>DW-6</b>				<b><u>B710410-06</u></b>			<b><u>Water</u></b>	
Diesel Range Hydrocarbons	1070686	10/27/97	10/28/97		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		108	%	

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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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**Total Metals by EPA 200 Series Methods  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
				<b><u>B710410-01</u></b>				<b><u>Water</u></b>
<b><u>DW-1</u></b>								
Zinc	1170125	11/5/97	11/6/97	EPA 200.7	0.0200	ND	mg/l	
Arsenic	1170163	11/6/97	11/7/97	EPA 206.2	0.00400	ND	"	
Lead	"	"	11/6/97	EPA 239.2	0.00200	<b>0.00432</b>	"	
				<b><u>B710410-02</u></b>				<b><u>Water</u></b>
<b><u>DW-2</u></b>								
Zinc	1170125	11/5/97	11/6/97	EPA 200.7	0.0200	ND	mg/l	
Arsenic	1170163	11/6/97	11/7/97	EPA 206.2	0.00400	ND	"	
Lead	"	"	11/6/97	EPA 239.2	0.00200	<b>0.00336</b>	"	
				<b><u>B710410-03</u></b>				<b><u>Water</u></b>
<b><u>DW-3</u></b>								
Zinc	1170125	11/5/97	11/6/97	EPA 200.7	0.0200	ND	mg/l	
Arsenic	1170163	11/6/97	11/7/97	EPA 206.2	0.00400	ND	"	
Lead	"	"	11/6/97	EPA 239.2	0.00200	<b>0.00200</b>	"	
				<b><u>B710410-04</u></b>				<b><u>Water</u></b>
<b><u>DW-4 (R)</u></b>								
Zinc	1170125	11/5/97	11/6/97	EPA 200.7	0.0200	ND	mg/l	
Arsenic	1170163	11/6/97	11/7/97	EPA 206.2	0.00400	ND	"	
Lead	"	"	11/6/97	EPA 239.2	0.00200	ND	"	
				<b><u>B710410-05</u></b>				<b><u>Water</u></b>
<b><u>DW-5</u></b>								
Zinc	1170125	11/5/97	11/6/97	EPA 200.7	0.0200	<b>0.0237</b>	mg/l	
Arsenic	1170163	11/6/97	11/7/97	EPA 206.2	0.00400	ND	"	
Lead	"	"	11/6/97	EPA 239.2	0.00200	<b>0.00235</b>	"	
				<b><u>B710410-06</u></b>				<b><u>Water</u></b>
<b><u>DW-6</u></b>								
Zinc	1170125	11/5/97	11/6/97	EPA 200.7	0.0200	ND	mg/l	
Arsenic	1170163	11/6/97	11/7/97	EPA 206.2	0.00400	ND	"	
Lead	"	"	11/6/97	EPA 239.2	0.00200	<b>0.00269</b>	"	

  
Matthew Essig, Project Manager



**NORTH  
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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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**Polychlorinated Biphenyls by EPA Method 8081  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-3</b>				<b>B710410-03</b>			<b>Water</b>	<b>1,2</b>
Aroclor 1016	1070711	10/28/97	11/1/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		93.7	%	
<b>DW-4(R)</b>				<b>B710410-04</b>			<b>Water</b>	<b>1,2</b>
Aroclor 1016	1070711	10/28/97	11/1/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		89.9	%	
<b>DW-5</b>				<b>B710410-05</b>			<b>Water</b>	<b>1,2</b>
Aroclor 1016	1070711	10/28/97	11/1/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	
Aroclor 1232	"	"	"		0.100	ND	"	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		81.5	%	
<b>DW-6</b>				<b>B710410-06</b>			<b>Water</b>	<b>1,2</b>
Aroclor 1016	1070711	10/28/97	11/1/97		0.100	ND	ug/l	
Aroclor 1221	"	"	"		0.100	ND	"	

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\*Refer to end of report for text of notes and definitions.

  
Matthew Essig, Project Manager

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9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132



Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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**Polychlorinated Biphenyls by EPA Method 8081  
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes <sup>1</sup>
<b>DW-6 (continued)</b>				<b>B710410-06</b>			<b>Water</b>	<b>1.2</b>
Aroclor 1232	1070711	10/28/97	11/1/97		0.100	ND	ug/l	
Aroclor 1242	"	"	"		0.100	ND	"	
Aroclor 1248	"	"	"		0.100	ND	"	
Aroclor 1254	"	"	"		0.100	ND	"	
Aroclor 1260	"	"	"		0.100	ND	"	
Aroclor 1262	"	"	"		0.100	ND	"	
Aroclor 1268	"	"	"		0.100	ND	"	
Surrogate: TCX	"	"	"	40.0-130		91.5	%	



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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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## Polynuclear Aromatic Compounds by EPA Method 8310 North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>DW-2</b>		<b>B710410-02</b>		<b>Water</b>				
Acenaphthene	1070751	10/29/97	11/3/97		1.00	ND	ug/l	
Acenaphthylene	"	"	"		1.00	ND	"	
Anthracene	"	"	"		1.00	ND	"	
Benzo (a) anthracene	"	"	"		0.100	ND	"	
Benzo (a) pyrene	"	"	"		0.100	ND	"	
<b>Benzo (b) fluoranthene</b>	"	"	"		0.100	<b>0.174</b>	"	3
Benzo (ghi) perylene	"	"	"		0.100	ND	"	
Benzo (k) fluoranthene	"	"	"		0.100	ND	"	
<b>Chrysene</b>	"	"	"		0.100	<b>0.223</b>	"	3
<b>Dibenzo (a,h) anthracene</b>	"	"	"		0.100	<b>0.287</b>	"	3
Fluoranthene	"	"	"		0.100	ND	"	
Fluorene	"	"	"		1.00	ND	"	
Indeno (1,2,3-cd) pyrene	"	"	"		0.100	ND	"	
Naphthalene	"	"	"		1.00	ND	"	
Phenanthrene	"	"	"		1.00	ND	"	
Pyrene	"	"	"		1.00	ND	"	
<i>Surrogate: 9,10-Diphenylanthracene</i>	"	"	"	60.0-140		128	%	
<b>DW-5</b>		<b>B710410-05</b>		<b>Water</b>				
Acenaphthene	1070751	10/29/97	11/3/97		1.00	<b>1.50</b>	ug/l	
Acenaphthylene	"	"	"		1.00	ND	"	
Anthracene	"	"	"		1.00	ND	"	
Benzo (a) anthracene	"	"	"		0.100	ND	"	
Benzo (a) pyrene	"	"	"		0.100	ND	"	
Benzo (b) fluoranthene	"	"	"		0.100	ND	"	
Benzo (ghi) perylene	"	"	"		0.100	ND	"	
Benzo (k) fluoranthene	"	"	"		0.100	ND	"	
Chrysene	"	"	"		0.100	ND	"	
Dibenzo (a,h) anthracene	"	"	"		0.100	ND	"	
Fluoranthene	"	"	"		0.100	ND	"	
Fluorene	"	"	"		1.00	ND	"	
Indeno (1,2,3-cd) pyrene	"	"	"		0.100	ND	"	
Naphthalene	"	"	"		1.00	ND	"	
Phenanthrene	"	"	"		1.00	ND	"	
Pyrene	"	"	"		1.00	ND	"	
<i>Surrogate: 9,10-Diphenylanthracene</i>	"	"	"	60.0-140		117	%	

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\*Refer to end of report for text of notes and definitions.

  
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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up/Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1070686</b>		<b>Date Prepared: 10/27/97</b>		<b>Extraction Method: EPA 3520/600 Series</b>						
<b>Blank</b>										
Diesel Range Hydrocarbons	10/28/97			ND	mg/l	0.250				
Heavy Oil Range Hydrocarbons	"			ND	"	0.750				
Surrogate: 2-FBP	"	0.358		0.288	"	50.0-150	80.4			
<b>LCS</b>										
<b>1070686-BS1</b>										
Diesel Range Hydrocarbons	10/28/97	2.00		1.87	mg/l	39.0-121	93.5			
Surrogate: 2-FBP	"	0.358		0.293	"	50.0-150	81.8			
<b>Duplicate</b>										
<b>1070686-DUP1      B710410-01</b>										
Diesel Range Hydrocarbons	10/28/97		ND	0.261	mg/l				44.0	
Surrogate: 2-FBP	"	0.676		0.541	"	50.0-150	80.0			

  
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### Total Metals by EPA 200 Series Methods/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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<b>Batch: 1170125</b>		<b>Date Prepared: 11/5/97</b>			<b>Extraction Method: EPA 3010</b>					
<b>Blank</b>		<b>1170125-BLK1</b>								
Zinc	11/6/97			ND	mg/l	0.0200				
<b>LCS</b>		<b>1170125-BS1</b>								
Zinc	11/6/97	1.00		0.978	mg/l	80.0-120	97.8			
<b>Duplicate</b>		<b>1170125-DUP1 B710423-01</b>								
Zinc	11/6/97		0.380	0.388	mg/l			20.0	2.08	
<b>Matrix Spike</b>		<b>1170125-MS1 B710423-01</b>								
Zinc	11/6/97	1.00	0.380	1.22	mg/l	80.0-120	84.0			
<b>Matrix Spike</b>		<b>1170125-MS2 B710423-01</b>								
Zinc	11/6/97	2.00	0.380	2.22	mg/l	80.0-120	92.0			
<b>Matrix Spike Dup</b>		<b>1170125-MSD1 B710423-01</b>								
Zinc	11/6/97	1.00	0.380	1.19	mg/l	80.0-120	81.0	20.0	3.64	
<b>Batch: 1170163</b>		<b>Date Prepared: 11/6/97</b>			<b>Extraction Method: EPA 3020</b>					
<b>Blank</b>		<b>1170163-BLK1</b>								
Arsenic	11/7/97			ND	mg/l	0.00400				
Lead	11/6/97			ND	"	0.00200				
<b>LCS</b>		<b>1170163-BS1</b>								
Arsenic	11/7/97	0.0500		0.0477	mg/l	75.0-125	95.4			
Lead	11/6/97	0.0250		0.0250	"	75.0-125	100			
<b>Duplicate</b>		<b>1170163-DUP1 B710423-01</b>								
Arsenic	11/7/97		0.00800	0.00700	mg/l			20.0	13.3	
Lead	11/6/97		ND	ND	"			20.0		
<b>Matrix Spike</b>		<b>1170163-MS1 B710423-01</b>								
Arsenic	11/7/97	0.0500	0.00800	0.0474	mg/l	70.0-130	78.8			
Lead	11/6/97	0.0250	ND	0.0236	"	70.0-130	94.4			
<b>Matrix Spike Dup</b>		<b>1170163-MSD1 B710423-01</b>								
Arsenic	11/7/97	0.0500	0.00800	0.0471	mg/l	70.0-130	78.2	20.0	0.764	
Lead	11/6/97	0.0250	ND	0.0233	"	70.0-130	93.2	20.0	1.28	

  
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Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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## Polychlorinated Biphenyls by EPA Method 8081/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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**Batch: 1070711**      **Date Prepared: 10/28/97**      **Extraction Method: EPA 3520/600 Series**

<b>Blank</b> <span style="float: right;"><b>1,2</b></span>										
<b>1070711-BLK1</b>										
Aroclor 1016	11/1/97			ND	ug/l	0.100				
Aroclor 1221	"			ND	"	0.100				
Aroclor 1232	"			ND	"	0.100				
Aroclor 1242	"			ND	"	0.100				
Aroclor 1248	"			ND	"	0.100				
Aroclor 1254	"			ND	"	0.100				
Aroclor 1260	"			ND	"	0.100				
Aroclor 1262	"			ND	"	0.100				
Aroclor 1268	"			ND	"	0.100				
Surrogate: TCX	"	0.200		0.175	"	40.0-130	87.5			

<b>LCS</b> <span style="float: right;"><b>1,2</b></span>										
<b>1070711-BS1</b>										
Aroclor 1260	11/1/97	10.0		11.2	ug/l	33.0-122	112			
Surrogate: TCX	"	0.200		0.184	"	40.0-130	92.0			

<b>LCS Dup</b> <span style="float: right;"><b>1,2</b></span>										
<b>1070711-BSD1</b>										
Aroclor 1260	11/1/97	10.0		11.5	ug/l	33.0-122	115	21.0	2.64	
Surrogate: TCX	"	0.200		0.182	"	40.0-130	91.0			

  
 Matthew Essig, Project Manager



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## Polynuclear Aromatic Compounds by EPA Method 8310/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1070751</b>			<b>Date Prepared: 10/29/97</b>			<b>Extraction Method: EPA 3520/600 Series</b>				
<b>Blank</b>			<b>1070751-BLK1</b>							
Acenaphthene	11/3/97			ND	ug/l	1.00				
Acenaphthylene	"			ND	"	1.00				
Anthracene	"			ND	"	1.00				
Benzo (a) anthracene	"			ND	"	0.100				
Benzo (a) pyrene	"			ND	"	0.100				
Benzo (b) fluoranthene	"			ND	"	0.100				
Benzo (ghi) perylene	"			ND	"	0.100				
Benzo (k) fluoranthene	"			ND	"	0.100				
Chrysene	"			ND	"	0.100				
Dibenzo (a,h) anthracene	"			ND	"	0.100				
Fluoranthene	"			ND	"	0.100				
Fluorene	"			ND	"	1.00				
Indeno (1,2,3-cd) pyrene	"			ND	"	0.100				
Naphthalene	"			ND	"	1.00				
Phenanthrene	"			ND	"	1.00				
Pyrene	"			ND	"	1.00				
Surrogate: 9,10-Diphenylanthracene	"	5.16		6.35	"	60.0-140	123			
<b>LCS</b>			<b>1070751-BS1</b>							
Chrysene	11/3/97	10.0		8.33	ug/l	40.0-120	83.3			
Fluorene	"	10.0		9.14	"	40.0-120	91.4			
Indeno (1,2,3-cd) pyrene	"	10.0		9.20	"	40.0-120	92.0			
Surrogate: 9,10-Diphenylanthracene	"	5.16		6.30	"	60.0-140	122			
<b>LCS Dup</b>			<b>1070751-BSD1</b>							
Chrysene	11/3/97	10.0		8.26	ug/l	40.0-120	82.6	25.0	0.844	
Fluorene	"	10.0		8.77	"	40.0-120	87.7	30.0	4.13	
Indeno (1,2,3-cd) pyrene	"	10.0		8.83	"	40.0-120	88.3	28.0	4.10	
Surrogate: 9,10-Diphenylanthracene	"	5.16		5.85	"	60.0-140	113			

  
 Matthew Essigs Project Manager

Dalton, Olmsted and Fuglevand 11711 Northcreek Pkwy S, Ste # D101 Bothell, WA 98011	Project: Bellfield Office Park Project Number: HEW-020 Project Manager: Matthew Dalton	Sampled: 10/22/97 to 10/21/97 Received: 10/22/97 Reported: 11/7/97 15:03
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**Notes and Definitions**

#	Note
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1 To reduce matrix interference, the sample extract has undergone copper clean-up, method 3660, which is specific to sulfur contamination.

2 To reduce matrix interference, the sample extract has undergone sulfuric acid clean-up, method 3665, which is specific to hydrocarbon contamination.

3 Qualitative confirmation (second detector) for this analyte is not available at the concentration found.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

**CHAIN OF CUSTODY REPORT**

Work Order # **B710410**

REPORT TO: **DOF**  
ATTENTION: **M. Dalton**  
ADDRESS:  
PHONE: **486-7905** FAX: **486-7651**  
PROJECT NAME: **Bellefields Office Pk**  
PROJECT NUMBER: **HEW-020**  
SAMPLED BY: **T. Olusied**

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

Analysis Request:  
**WTRH-DXW/SS**  
**AS Pb, Zn**  
**PAHS @ 310**  
**PCBS @ 8000**

**TURNAROUND REQUEST in Business Days \***

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

Fuels & Hydrocarbon Analyses  
 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																	
1. DW-1	10/22 1130	B710410-01	X	X																
2. DW-2	" 1430	02	X	X	X															
3. DW-3	" 1030	03	X	X		X														
4. DW-4(R) TW	10/21 1600	04	X	X		X														
5. DW-5	10/22 1315	05	X	X	X	X														
6. DW-6	10/21 1500	06	X	X		X														
7.																				
8.																				
9.																				
10.																				

MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
W	2	
}	3	
	3	
	3	
	4	
	3	

RELINQUISHED BY (Signature): *T. Olusied* DATE: **10/22/97** RECEIVED BY (Signature): *D. Heinz* DATE: **10/22/97**

PRINT NAME: **DOF** FIRM: **DOF** TIME: **1420** PRINT NAME: **D. HEINZ** FIRM: **NGAB** TIME: **1420**

RELINQUISHED BY (Signature): DATE: RECEIVED BY (Signature): DATE:

PRINT NAME: FIRM: TIME: PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: **8.3° w/o cs.**