ENVIROCON

Remedial Action Work Plan
North Point Apartments Site
Everett, Washington

Prepared By:

Envirocon, Inc.
10400 North Burgard Way
Portland, Oregon 97203

February 12, 2001

REMEDIAL ACTION WORK PLAN

NORTH POINT APARTMENTS SITE

EVERETT, WASHINGTON
February 12, 2001

TABLE OF CONTENTS

1.0 INTRODUCTION

Envirocon, Inc. has been contracted to provide environmental remediation services at the future North Point Apartment Site (SEPA # 73-98), 1001 East Marine View Drive in Everett, WA (Figure 1 Site Location Map). The site is currently an undeveloped lot. The scope of work on this project includes excavation and offsite disposal of approximately 17,000 cubic yards arsenic containing soils above the MTCA 20-ppm residential action level, and performance of confirmation sampling to verify that action levels have been met. In August 2000 Envirocon excavated and transported offsite approximately 5,100 cubic yards (8,000 tons) of impacted soils. These soils represented the original removal area footprint as determined by a previous site assessment performed by GeoTech Consultants. During excavation activities Envirocon obtained samples from the slope on the western side of the site. After the removal of site vegetation it became apparent that the material in the slope was visibly different in grade and appearance from the rest of the site and appeared to be fill brought into the site some time in the past. Sample analysis showed arsenic concentrations in the slope were considerably higher than the rest of the site and ranged from 70-500 mg/kg at 6" in depth. Further test pits were performed on the slope to determine the vertical and lateral extent of soils exceeding the cleanup level of 20 mg/kg. The results of the test pitting indicate that the entire slope contains soils with elevated arsenic concentrations. Levels range from 28-2600 mg/kg, with an average value of approximately 300 mg/kg. The depth of the fill appears to range from 6 – 12 feet bgs with most areas reaching a native silt layer at 11 feet bgs.

Envirocon demobilized from the site on 8/30/00 to await the results of test pit sampling and the resolution by its client of issues concerning the responsibility for funding of additional remediation. In mid February 2001 Envirocon will remobilize to the site to remove the impacted slope soils as well as complete the removal of any remaining hot spots in the original excavation footprint. This work plan details the anticipated activities to be performed during Phase II of the site remediation.

2.0 SITE DESCRIPTION

2.1 Location

A. Site Name
Proposed North Point Apartments Site

B. Street Address
The Site is located at 1001 East Marine View Drive Everett, Washington. The site is bordered on the west by Marine view drive, on the south by 11th street, on the North by an apartment complex and on the east by undeveloped property and rail.

C. Phone Number
Offsite phone (360) 267-3342

D. Map of Site Location:
See Figure #1

2.2 TOPOGRAPHY AND GEOLOGY

The NPA site is an undeveloped 4.5 acre lot, rectangular in shape with approximate dimensions of 600 feet north to south and 320 feet east to west. It is fronted on the west side by East Marine View Drive and is flat in an eastward direction for 30 to 40 feet then drops steeply 10-15 feet in elevation. The average depth of the site is 335 above sea level. After dropping the 10-15 feet the site gently slopes downward to the eastern property line. Prior to remediation activities the site was well vegetated with numerous trees and dense underbrush. The vegetation was all removed during Phase I remediation activities and the site is now covered with a thin layer of wood chips for dust control purposes. GeoTech Consultants Inc. performed test pitting at the site in July 1998 to facilitate a geotechnical engineering study on subsurface conditions and the suitability of construction of a multi-residential development. Boring logs from this study indicate that over the majority of the site a 6-12 inch layer of topsoil was underlain by native soils consisting of 3 to 5 feet of loose to medium dense, brown, weathered, silty sand with gravel which then became gray and very dense. The silty sands were referred to as glacier till. The western portion of the site, which is the focus of the phase II remediation activities, consisted of 6-10 feet of fill material, mostly loose silty sand with some concrete and asphalt debris. The fill layer is underlain by glacier till. The site's topsoil layer was removed during Phase I remediation activities.

2.3 GROUNDWATER

Groundwater was not encountered onsite during any test pitting or Phase I excavation activities.

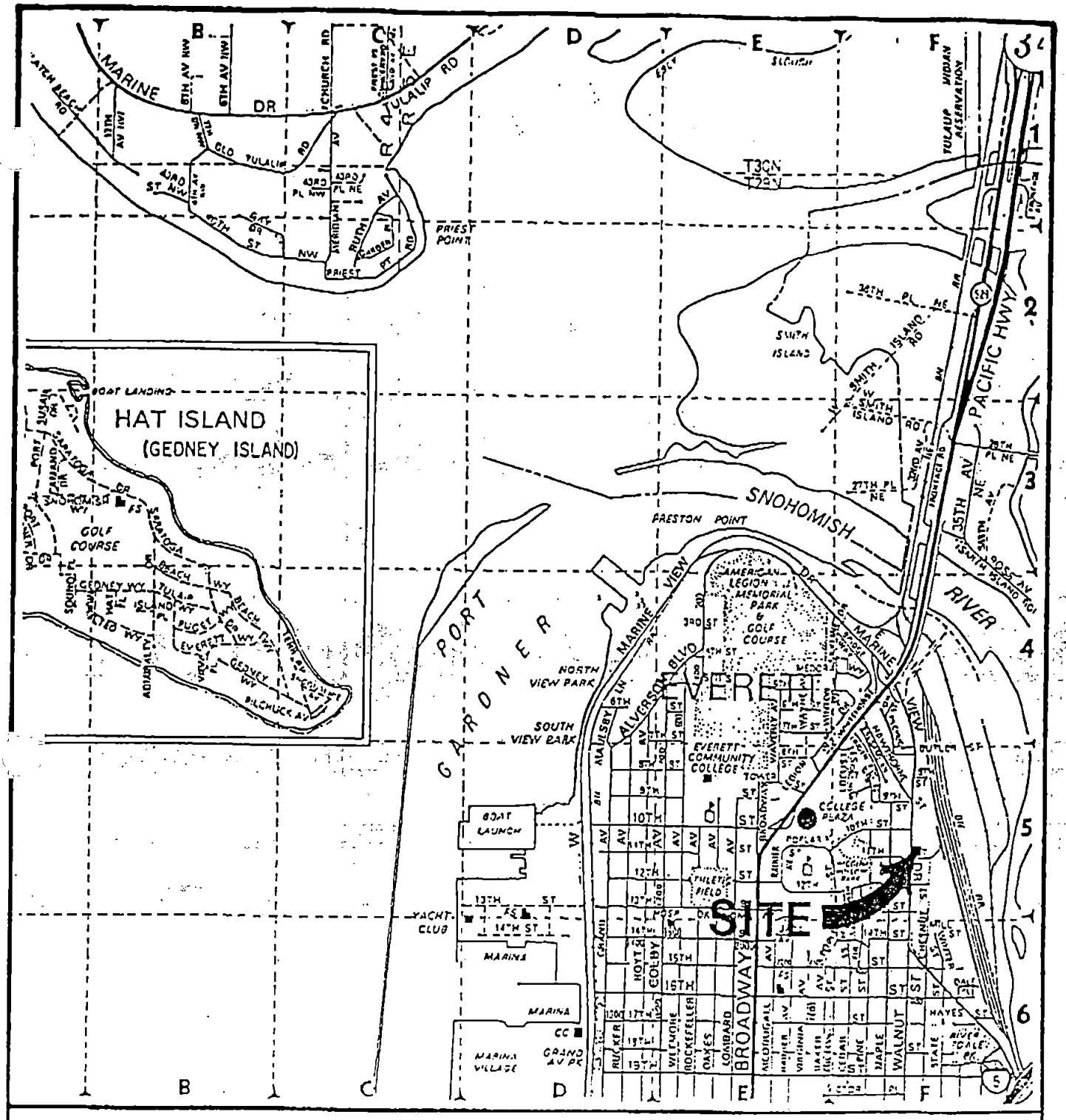
3.0 SOURCE, NATURE AND EXTENT OF CONTAMINATION

The subject property is located within the southeastern portion of the area designated as the Everett Smelter site. A smelter processing lead, gold, silver and arsenic ore operated in the area from 1894 to 1912. In 1990 it was discovered that many of the properties surrounding the smelter were impacted by air emissions from the smelter stacks and had elevated levels of arsenic in site soils. GeoTech Consultants performed a site assessment on the subject property in March 1998 to determine the extent of arsenic contamination from the ASARCO smelter. The assessment consisted of collection 41 soil samples from the site at twelve locations. No samples were taken on the western slope. Sample depth varied form surface to 30" below ground surface (bgs). Samples were analyzed for total arsenic concentration. Based on the sampling results, GeoTech Consultants concluded that throughout the site, arsenic concentrations in shallow surface soils above 24" bgs exceeded MTCA Method A cleanup levels (20 PPM). The volume of arsenic impacted soils was estimated to be 5100 in-place cubic yards. This material was removed during the Phase I remedial action activities. Analytical results for the assessment are summarized in Table I and visually represented in Figure 1A.

During Phase I activities, Envirocon obtained samples from the steeply sloped area on the western side of the site. Sample analysis showed arsenic concentrations in the slope were considerably higher than the rest of the site and ranged from 70-500 mg/kg at 6" in depth. Further test pits were performed on the slope to determine the vertical and lateral extent of soils exceeding the cleanup level of 20 mg/kg. The results of the test pitting indicate that elevated arsenic concentrations are prevalent throughout the western side of the site to an average depth of 9 feet. Levels range from 28-2600 mg/kg, with an average value of approximately 300 mg/kg. The contamination appears to be associated with fill material that comprises this area. The depth of the fill layer appears to range from 6 – 12 feet bgs with most areas reaching a native glacial till at 11 feet bgs. It is estimated that approximately 12,000 in place cubic yards of arsenic impacted soils are contained within the western area of the site. Refer to Table II for a summary of test pit analytical results.

4.0 PREVIOUS CONTAMINANT REMOVAL ACTIVITIES

In August 2000 Envirocon excavated and transported offsite approximately 5100 cubic yards of impacted soils from the NPA site. These soils represented the original removal area footprint as determined by a previous site assessment performed by GeoTech Consultants. Confirmation sampling results from Phase I are summarized in Table III. Analytical laboratory results are attached as Appendix I. Refer to Figure 2 for the removal area footprint and the confirmation sample locations.



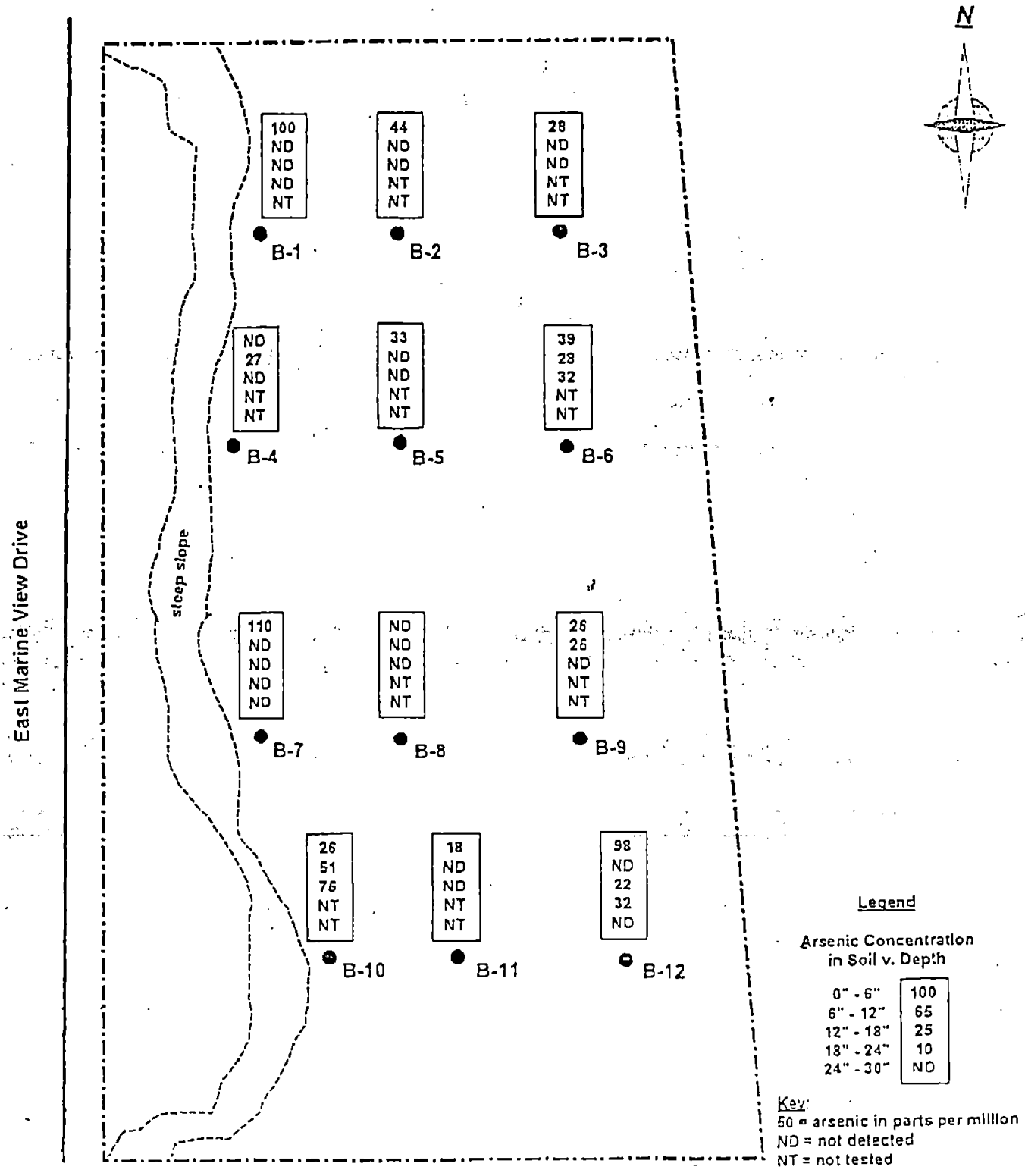
MAP COURTESY OF

GEOTECH CONSULTANTS

FIGURE 1 VICINITY MAP

10XX E. MARINE VIEW DR.

EVERETT, WA



MAP COURTESY OF

GEOTECH CONSULTANTS

SAMPLE LOCATION PLAN

Undeveloped 4.22-Acre Parcel
East Marine View Drive
FIGURE 1a Everett, Washington

Job No:	Date:		Plate:
97382E	March 1998	No Scale	2

Table I Summary of Laboratory Results Site Assessment Sampling

Depth	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12
0-6"	100	44	28	ND	33	39	110	ND	26	26	18	98
6-12"	ND	ND	ND	27	ND	28	ND	ND	25	51	ND	ND
12-18"	ND	ND	ND	ND	ND	32	ND	ND	ND	75	ND	22
18-24"	ND	NT	NT	NT	NT	NT	ND	NT	NT	NT	NT	32
24-30"	NS	NT	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND

Notes:
1. Results are reported in parts per million (PPM).
2. ND denotes not detected above detection limit of 10-16 PPM.
3. NT denotes not tested.
4. NS denotes not sampled.

Source: GeoTech Consultants
March 18, 1998 Site Assessment

Table II Summary of Analysis of Soil Samples from Test Pits Top of Western Slope
Arsenic Concentration in PPM

Depth (bgs)	Sample # 14	Sample # 16	Sample # 17	Sample # 18	Sample # 19	Sample # 20	Sample # 21	Sample # 38	Sample # 39
0.5'	959	36.2	336	323	513	2680	493		
2'	196	293	376	304	335	284	727	-	-
4'	65.7	242	106	69.6	41.3	270	854	-	-
6'	65.5	85.2	1400	304	265	844	1050	-	-
8'	51.1	118	87.6	249	7.10	52.8	106	-	-
9'	3.15	87.8	5.18	45.8	3.34	19.3	323	172	2.9
10'	-	28.1	-	4.86	2.24	2.06	4	-	-
12'	6.87	85.1	3.61	6.86	2.15	2.58	297	2.09	45.3
13'	-	3.01	-	-	-	-	3.75	-	6.96
14'	-	-	-	-	-	-	-	-	-
15'	2.89	1.99	2.35	-	-	-	-	-	-

TABLE III

Summary of Confirmation Sampling Results			
Confirmation Sample #	Grid #	Coordinates	Total Arsenic Concentration (mg/kg)
1	G-3	254-594-0.5	7.66
2	G-3	215-559-0.5	55.00
3	G-3	176-526-0.5	6.97
4	G-2	172-598-0.5	230.00
4a	G-2	172-598-0.5 1 foot	8.64
5	G-2	129-559-0.5	27.30
5a	G-2	129-559-0.5 1 foot	3.18
6	G-26	117-31-0.5	52.60
7	G-27	252-21-0.5	9.72
8	G-27	185-78-0.5	2.67
9	G-27	215-43-0.5	8.85
10	G-28	341-81-1	1.45
11	G-28	301-43-0.5	15.70
12	G-28	318-20-0.5	51.40
12a	G-28	318-20-1.5	7.89
13	G-23	231-106-0.5	2.29
14	G-1	24-540-0.5	959.00
15	G-1	67-567-0.5	74.70
16	G-5	35-500-0.5	36.20
17	G-5	30-450-0.5	33.60
18	G-9	28-395-0.5	323.00
19	G-13	25-309-0.5	513.00
20	G-17	20-258-0.5	2680.00
21	G-17	27-206-0.5	493.00
22	G-4	301-574-0.5	6.68
23	G-4	288-528-0.5	5.93
24	G-4	268-559-0.5	9.69
25	G-3	238-537-0.5	6.42
26	G-24	300-114-2	3.59
27	G-24	301-129-2	7.39
28	G-24	323-146-2	1.92
29	G-24	258-215-2	6.40
30	G-20	301-192-1	6.02
31	G-20	312-227-1	14.20
32	G-8	301-473-0.5	55.60
32a	G-8	301-473-1.0	12.30
33	G-8	258-451-0.5	13.30
34	G-8	314-442-0.5	2.91
35	G-7	223-486-0.5	2.66
36	G-7	187-440-0.5	41.90

36a	G-7	187-440-1.0	49.50
37	G-7	172-473-0.5	5.27
38	G-21	25-129	Slope Test Pit
39	G-21	60-86	Slope Test Pit
40	G-6	129-423-0.5	5.81
41	G-6	129-516-0.5	16.60
42	G-6	102-445-0.5	11.90
43	G-16	338-270-1	5.49
44	G-16	301-301-0.5	3.40
45	G-16	258-273-0.5	2.58
46	G-12	305-354-1.5	35.40
47	G-12	258-354-1.5	7.47
48	G-12	278-414-1.5	5.72
49	G-23	236-152-0.5	4.56
50	G-19	215-215-0.5	2.38
51	G-10	129-415-0.5	32.30
52	G-18	129-215-0.5	5.99
53	G-18	126-207-0.5	26.90
54	G-18	157-180-0.5	3.76
55	G-14	164-329-0.5	2.51
56	G-14	129-301-0.5	3.96
57	G-14	98-341-0.5	8.24
58	G-11	184-357-0.5	2.51
59	G-11	241-406-0.5	4.26
60	G-11	215-387-0.5	10.60
61	G-15	222-338-0.5	32.00
62	G-15	215-301-0.5	22.00
63	G-15	251-292-0.5	2.55

5.0 PROPOSED PHASE II REMEDIAL ACTION PLAN

This work plan format is intended to follow the anticipated chronological order of scheduled events and activities. Certain tasks may be conducted simultaneously or in different order depending on the conditions encountered as on-site work progresses. This plan is divided into six distinct phases:

I. Submittals and Permitting
II. Mobilization
III. Excavation of Impacted Soils
IV. Offsite Transport and Disposal
V. Confirmation Sampling
VI. Backfill

5.1 SUBMITTALS AND PERMITTING

Permits for excavation, and hydrant use, were obtained during Phase I of the site remediation and are still in place. With the exception of this work plan there are no anticipated submittals.

5.2 MOBILIZATION

Site mobilization shall commence in mid-February 2001. Envirocon anticipates a one or two day mobilization period, including placement of equipment and personnel decontamination stations, and construction of a rock road for truck access.

5.2.1 - Temporary Facilities

A portable toilet with a wash sink is positioned inside the site support zone away from anticipated trailer and vehicle traffic areas and routes. An equipment storage trailer is situated at the site. The trailer shall serve as the Envirocon office onsite and contain PPE, potable drinking water, and miscellaneous tools and equipment.

5.2.2 - Personnel Decontamination

Envirocon will install one mobile personnel decontamination station. The mobile station shall consist of a three-bucket boot wash system, eyewash, and a used Tyvek and glove receptacle. The station shall be situated at the border of the exclusion zone and the contaminant reduction zone adjacent to truck exit/entry points but situated so that they will not be in the path of heavy equipment traffic. Boot covers shall be utilized in areas where a dry decontamination is preferable.

5.2.3 - Equipment Decontamination

Equipment shall be decontaminated through utilization of a combination of a dry decontamination procedure and a mobile decontamination pad designed by Envirocon. A design Envirocon has utilized at several Superfund sites is a prefabricated metal grate and tray. The station will be constructed to have a total liquid containment capacity of 500 gallons. The station draws fresh water from connection to the hydrant system. A pressure washer, or water truck and fire hose are

utilized as the washing mechanism. A sump pump transfers spent decontamination wastewater from the station to the wastewater holding tanks. Wastewater will be recycled whenever possible as excavation and stockpile dust control.

5.2.4 -Installation Temporary Fencing

Envirocon placed temporary fencing around the site perimeter during Phase I activities. The fence consists of six-foot high chain link panels.

5.2.5 - Stockpile Staging Areas

Envirocon anticipates direct loading of the majority of excavated soils into trucks. If it becomes necessary to construct stockpiles they will be placed adjacent to the truck-loading zone.

5.2.6 - Sediment Control

A sediment control system consist of silt fencing placed along the down gradient site perimeter was installed during Phase I remediation activities in August. The silt fence shall be inspected periodically, and damaged sections repaired or replaced.

5.2.7 - Health and Safety

The Envirocon site health and safety plan specifically address issues and hazards, which could be encountered during the project. These include such items as the operation of heavy equipment, heat and/or cold stress, and contact with arsenic contaminated soils. All Envirocon employees are 40 hour OSHA trained and shall have read the site safety plan prior to mobilization on-site. An orientation meeting shall be held at the site the first day of mobilization. The meeting shall be conducted with client representatives present to review any safety concerns at the site. Morning tailgate safety meetings shall be conducted daily thereafter and documented on Envirocon's daily construction logs.

5.3 EXCAVATION OF IMPACTED SOILS

Excavation activities shall begin the third day onsite. Test pitting of the western slope by Envirocon has indicated that the majority of the slope will have to be removed to meet the cleanup goals of 20 mg/kg total arsenic for surface soils and 500 mg/kg for soils four feet and deeper below ground surface. It will be necessary to excavate to depths of 9-12' below ground surface in order to meet the cleanup levels for areas that are situated in the future location of building foundations. A 20' wide strip on the western side of the slope will be excavated to 6' bgs for a landscape strip. A demarcation fabric will be placed at the excavation bottoms in the landscape area to delineate contaminant removal boundaries for future construction personnel. In addition to the slope removal several grid squares in the Phase I removal area will be re-excavated to address hot spots still above the cleanup level 20 mg/kg total Arsenic. A 60,000-LB excavator will perform excavation of contaminated soils. The excavator will direct load soils into truck and trailers for transport offsite. Any overburden soils will be stockpiled immediately adjacent to excavations. Fire hose connected to a hydrant or water truck will provide dust control during excavation activities. Initial excavation is expected to last 35 days. It is expected that an additional day of excavation will be required due to the necessity of re-excavating areas failing to meet site action levels. All excavation shall be performed by equipment operators experienced in removing soil in six inch to one-foot lifts. Depths shall be checked periodically to avoid over excavation.

5.4 OFFSITE TRANSPORT AND DISPOSAL

Transport of contaminated soils to an offsite Subtitle D disposal facility shall begin on the fourth day onsite and continue for thirty-five days. Approximately 500 tons of soil will be transported offsite by 30-ton truck and trailers each day. During loading truck tires shall rest on clean soils, rock or on plastic whenever possible to reduce the necessity for decontamination. The trucks shall be provided by ECTI, a licensed hazardous waste transporter.

All trucks will be tarped, and wheels cleaned (as needed) prior to their leaving the site. ECTI's trucks will have onboard scales to verify their weights do not exceed DOT tolerances. Spill mitigation protocol is provided in Appendix II of this proposal. Envirocon has developed these procedures to minimize the risk of cross tracking contamination offsite and to effectively deal with offsite accidents of trucks on route to the disposal facility.

It is currently intended that contaminated soils shall be disposed of at Waste Management's Columbia Ridge Subtitle D facility in Arlington, Oregon. Soil will be transported from the NPA site to a Waste Management transfer station in Seattle where it will be loaded onto rail cars for transport to Columbia Ridge. Allied's Rabanco Subtitle D facility in Roosevelt Washington will be used as a supplemental disposal site as necessary to avoid schedule delays.

5.5 CONFIRMATION SAMPLING

The site has been broken into 86' X 86' foot grids for sampling purposes. Soil samples shall be taken from excavation bottoms following initial excavation of an area. Three samples shall be taken per grid with the maximum spacing being at 50-foot intervals, and analyzed by a state certified laboratory for total arsenic content. Samples shall have a twenty four-hour analytical turnaround time to allow excavation activities to proceed unimpeded. Areas exceeding the cleanup levels of 20-ppm or 500 PPM arsenic (4' bgs and below) shall be re-excavated in 30' X 30' sections and re-sampled. Approximately 10 % of confirmation samples shall also be analyzed for total lead content.

5.6 BACKFILL

Envirocon will commence backfill activity onsite after confirmation sampling has indicated that soils in the future landscape area meet the MCTA Method A cleanup levels. Approximately 3,000 tons of imported sand will be placed in the area and compacted to required specifications.

APPENDIX I

TEST PIT LABORATORY ANALYTICAL

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
14)24-540 2ft	B0H0383-01	Soil	08/17/00 07:50	08/17/00 16:30
14)24-540 4.0ft	B0H0383-02	Soil	08/17/00 07:53	08/17/00 16:30
14)24-540 6.0ft	B0H0383-03	Soil	08/17/00 07:56	08/17/00 16:30
14)24-540 8.0ft	B0H0383-04	Soil	08/17/00 08:00	08/17/00 16:30
14)24-540 9ft	B0H0383-05	Soil	08/17/00 08:05	08/17/00 16:30
16)35-500 2ft	B0H0383-06	Soil	08/17/00 08:15	08/17/00 16:30
16)35-500 4.0ft	B0H0383-07	Soil	08/17/00 08:18	08/17/00 16:30
16)35-500 6.0ft	B0H0383-08	Soil	08/17/00 08:18	08/17/00 16:30
16)35-500 8.0ft	B0H0383-09	Soil	08/17/00 08:25	08/17/00 16:30
16)35-500 9.0ft	B0H0383-10	Soil	08/17/00 08:28	08/17/00 16:30
17)30-450 2ft	B0H0383-11	Soil	08/17/00 08:39	08/17/00 16:30
17)30-450 4.0ft	B0H0383-12	Soil	08/17/00 08:42	08/17/00 16:30
17)30-450 6.0ft	B0H0383-13	Soil	08/17/00 08:45	08/17/00 16:30
17)30-450 8.0ft	B0H0383-14	Soil	08/17/00 08:49	08/17/00 16:30
)30-450 9.0ft	B0H0383-15	Soil	08/17/00 08:57	08/17/00 16:30
18)28-395 2ft	B0H0383-16	Soil	08/17/00 09:10	08/17/00 16:30
18)28-395 4.0ft	B0H0383-17	Soil	08/17/00 09:14	08/17/00 16:30
18)28-395 6.0ft	B0H0383-18	Soil	08/17/00 09:14	08/17/00 16:30
18)28-395 8.0ft	B0H0383-19	Soil	08/17/00 09:28	08/17/00 16:30
18)28-395 9.0ft	B0H0383-20	Soil	08/17/00 09:30	08/17/00 16:30
19)25-309 2ft	B0H0383-21	Soil	08/17/00 09:41	08/17/00 16:30
19)25-309 4.0ft	B0H0383-22	Soil	08/17/00 09:43	08/17/00 16:30
19)25-309 6.0ft	B0H0383-23	Soil	08/17/00 09:46	08/17/00 16:30
19)25-309 8.0ft	B0H0383-24	Soil	08/17/00 09:50	08/17/00 16:30
20)20-258 2ft	B0H0383-25	Soil	08/17/00 10:00	08/17/00 16:30
20)20-258 4.0ft	B0H0383-26	Soil	08/17/00 10:03	08/17/00 16:30
20)20-258 6.0ft	B0H0383-27	Soil	08/17/00 10:03	08/17/00 16:30
20)20-258 8.0ft	B0H0383-28	Soil	08/17/00 10:10	08/17/00 16:30
20)20-258 9.4ft	B0H0383-29	Soil	08/17/00 10:13	08/17/00 16:30

rth Creek Analytical - Bothell

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

Steve Davis, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
425.420.9200 fax 425.420.9210
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541.383.9310 fax 541.382.7588

Envirocon 3400 N. Burgard Way Portland OR/USA, 97203	Project: Steffan Jacobson Project Number: 14313 Project Manager: Dave Jacobs	**Reported:** 08/21/00 15:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
21)27-206 2ft	B0H0383-30	Soil	08/17/00 10:29	08/17/00 16:30
21)27-206 4.0ft	B0H0383-31	Soil	08/17/00 10:32	08/17/00 16:30
21)27-206 6.0ft	B0H0383-32	Soil	08/17/00 10:34	08/17/00 16:30
21)27-206 8.0ft	B0H0383-33	Soil	08/17/00 10:37	08/17/00 16:30
21)27-206 9.5ft	B0H0383-34	Soil	08/17/00 10:40	08/17/00 16:30

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
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Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
14)24-540 2ft (B0H0383-01) Soil	**Sampled: 08/17/00 07:50**		**Received: 08/17/00 16:30**						
Arsenic	196	6.21	mg/kg dry	20	0H17051	08/17/00	08/18/00	EPA 6020	
14)24-540 4.0ft (B0H0383-02) Soil	**Sampled: 08/17/00 07:53**		**Received: 08/17/00 16:30**						
Arsenic	65.7	3.45	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
14)24-540 6.0ft (B0H0383-03) Soil	**Sampled: 08/17/00 07:56**		**Received: 08/17/00 16:30**						
Arsenic	65.5	0.312	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
14)24-540 8.0ft (B0H0383-04) Soil	**Sampled: 08/17/00 08:00**		**Received: 08/17/00 16:30**						
Arsenic	51.1	0.340	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
14)24-540 9ft (B0H0383-05) Soil	**Sampled: 08/17/00 08:05**		**Received: 08/17/00 16:30**						
Arsenic	3.15	0.338	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
16)35-500 2ft (B0H0383-06) Soil	**Sampled: 08/17/00 08:15**		**Received: 08/17/00 16:30**						
Arsenic	293	3.36	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
5)35-500 4.0ft (B0H0383-07) Soil	**Sampled: 08/17/00 08:18**		**Received: 08/17/00 16:30**						
Arsenic	242	3.31	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
35-500 6.0ft (B0H0383-08) Soil	**Sampled: 08/17/00 08:18**		**Received: 08/17/00 16:30**						
Arsenic	85.2	0.331	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
16)35-500 8.0ft (B0H0383-09) Soil	**Sampled: 08/17/00 08:25**		**Received: 08/17/00 16:30**						
Arsenic	118	0.350	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	

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Envirocon
0400 N. Burgard Way
Portland OR/USA, 97203

Project: Steffan Jacobson
Project Number: 14313
Project Manager: Dave Jacobs

Reported:
08/21/00 15:09

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
16)35-500 9.0ft (B0H0383-10) Soil Sampled: 08/17/00 08:28 Received: 08/17/00 16:30									
Arsenic	87.8	0.312	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
17)30-450 2ft (B0H0383-11) Soil Sampled: 08/17/00 08:39 Received: 08/17/00 16:30									
Arsenic	376	3.12	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
17)30-450 4.0ft (B0H0383-12) Soil Sampled: 08/17/00 08:42 Received: 08/17/00 16:30									
Arsenic	106	3.27	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
17)30-450 6.0ft (B0H0383-13) Soil Sampled: 08/17/00 08:45 Received: 08/17/00 16:30									
Arsenic	1400	3.47	mg/kg dry	10	0H18043	08/18/00	08/21/00	EPA 6020	
17)30-450 8.0ft (B0H0383-14) Soil Sampled: 08/17/00 08:49 Received: 08/17/00 16:30									
Arsenic	87.6	0.350	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
17)30-450 9.0ft (B0H0383-15) Soil Sampled: 08/17/00 08:57 Received: 08/17/00 16:30									
Arsenic	5.18	0.314	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
8)28-395 2ft (B0H0383-16) Soil Sampled: 08/17/00 09:10 Received: 08/17/00 16:30									
Arsenic	304	3.50	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
,28-395 4.0ft (B0H0383-17) Soil Sampled: 08/17/00 09:14 Received: 08/17/00 16:30									
Arsenic	69.6	3.38	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
18)28-395 6.0ft (B0H0383-18) Soil Sampled: 08/17/00 09:14 Received: 08/17/00 16:30									
Arsenic	304	1.63	mg/kg dry	5	0H18043	08/18/00	08/21/00	EPA 6020	

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Envirocon 0400 N. Burgard Way Portland OR/USA, 97203	Project: Steffan Jacobson Project Number: 14313 Project Manager: Dave Jacobs	**Reported:** 08/21/00 15:09

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
18)28-395 8.0ft (B0H0383-19) Soil Sampled: 08/17/00 09:28 Received: 08/17/00 16:30									
Arsenic	249	3.31	mg/kg dry	10	0H18043	08/18/00	08/19/00	EPA 6020	
18)28-395 9.0ft (B0H0383-20) Soil Sampled: 08/17/00 09:30 Received: 08/17/00 16:30									
Arsenic	45.8	0.338	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
19)25-309 2ft (B0H0383-21) Soil Sampled: 08/17/00 09:41 Received: 08/17/00 16:30									
Arsenic	335	3.03	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
19)25-309 4.0ft (B0H0383-22) Soil Sampled: 08/17/00 09:43 Received: 08/17/00 16:30									
Arsenic	413	3.38	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
19)25-309 6.0ft (B0H0383-23) Soil Sampled: 08/17/00 09:46 Received: 08/17/00 16:30									
Arsenic	265	0.654	mg/kg dry	2	0H18043	08/18/00	08/21/00	EPA 6020	
19)25-309 8.0ft (B0H0383-24) Soil Sampled: 08/17/00 09:50 Received: 08/17/00 16:30									
Arsenic	7.10	0.312	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
20-258 2ft (B0H0383-25) Soil Sampled: 08/17/00 10:00 Received: 08/17/00 16:30									
Arsenic	284	3.11	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
20-258 4.0ft (B0H0383-26) Soil Sampled: 08/17/00 10:03 Received: 08/17/00 16:30									
Arsenic	270	3.25	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
20)20-258 6.0ft (B0H0383-27) Soil Sampled: 08/17/00 10:03 Received: 08/17/00 16:30									
Arsenic	844	3.38	mg/kg dry	10	0H18043	08/18/00	08/21/00	EPA 6020	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
20)20-258 8.0ft (B0H0383-28) Soil	**Sampled: 08/17/00 10:10**		**Received: 08/17/00 16:30**						
Arsenic	52.8	0.325	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
20)20-258 9.4ft (B0H0383-29) Soil	**Sampled: 08/17/00 10:13**		**Received: 08/17/00 16:30**						
Arsenic	19.3	0.305	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
21)27-206 2ft (B0H0383-30) Soil	**Sampled: 08/17/00 10:29**		**Received: 08/17/00 16:30**						
Arsenic	727	3.29	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
21)27-206 4.0ft (B0H0383-31) Soil	**Sampled: 08/17/00 10:32**		**Received: 08/17/00 16:30**						
Arsenic	854	3.07	mg/kg dry	10	0H17051	08/17/00	08/18/00	EPA 6020	
21)27-206 6.0ft (B0H0383-32) Soil	**Sampled: 08/17/00 10:34**		**Received: 08/17/00 16:30**						
Arsenic	1050	3.18	mg/kg dry	10	0H18043	08/18/00	08/21/00	EPA 6020	
21)27-206 8.0ft (B0H0383-33) Soil	**Sampled: 08/17/00 10:37**		**Received: 08/17/00 16:30**						
Arsenic	106	0.342	mg/kg dry	1	0H18043	08/18/00	08/19/00	EPA 6020	
1)27-206 9.5ft (B0H0383-34) Soil	**Sampled: 08/17/00 10:40**		**Received: 08/17/00 16:30**						
Arsenic	323	1.70	mg/kg dry	5	0H18043	08/18/00	08/21/00	EPA 6020	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
14)24-540 2ft (B0H0383-01) Soil	Sampled: 08/17/00 07:50	Received: 08/17/00 16:30							
Dry Weight	93.5	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
14)24-540 4.0ft (B0H0383-02) Soil	Sampled: 08/17/00 07:53	Received: 08/17/00 16:30							
Dry Weight	95.0	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
14)24-540 6.0ft (B0H0383-03) Soil	Sampled: 08/17/00 07:56	Received: 08/17/00 16:30							
Dry Weight	93.2	1.00	%	1	0H18036	08/18/00	08/21/00	BSOPSPL003R07	
14)24-540 8.0ft (B0H0383-04) Soil	Sampled: 08/17/00 08:00	Received: 08/17/00 16:30							
Dry Weight	92.9	1.00	%	1	0H18036	08/18/00	08/21/00	BSOPSPL003R07	
14)24-540 9ft (B0H0383-05) Soil	Sampled: 08/17/00 08:05	Received: 08/17/00 16:30							
Dry Weight	94.0	1.00	%	1	0H18036	08/18/00	08/21/00	BSOPSPL003R07	
16)35-500 2ft (B0H0383-06) Soil	Sampled: 08/17/00 08:15	Received: 08/17/00 16:30							
Dry Weight	91.5	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
35-500 4.0ft (B0H0383-07) Soil	Sampled: 08/17/00 08:18	Received: 08/17/00 16:30							
Dry Weight	89.9	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
35-500 6.0ft (B0H0383-08) Soil	Sampled: 08/17/00 08:18	Received: 08/17/00 16:30							
Dry Weight	87.8	1.00	%	1	0H18036	08/18/00	08/21/00	BSOPSPL003R07	
16)35-500 8.0ft (B0H0383-09) Soil	Sampled: 08/17/00 08:25	Received: 08/17/00 16:30							
Dry Weight	91.3	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	

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Envirocon
0400 N. Burgard Way
Portland OR/USA, 97203

Project: Steffan Jacobson
Project Number: 14313
Project Manager: Dave Jacobs

Reported:
08/21/00 15:09

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
16)35-500 9.0ft (B0H0383-10) Soil	**Sampled: 08/17/00 08:28**		**Received: 08/17/00 16:30**						
Dry Weight	90.9	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
17)30-450 2ft (B0H0383-11) Soil	**Sampled: 08/17/00 08:39**		**Received: 08/17/00 16:30**						
Dry Weight	92.7	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
17)30-450 4.0ft (B0H0383-12) Soil	**Sampled: 08/17/00 08:42**		**Received: 08/17/00 16:30**						
Dry Weight	88.4	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
17)30-450 6.0ft (B0H0383-13) Soil	**Sampled: 08/17/00 08:45**		**Received: 08/17/00 16:30**						
Dry Weight	89.6	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
17)30-450 8.0ft (B0H0383-14) Soil	**Sampled: 08/17/00 08:49**		**Received: 08/17/00 16:30**						
Dry Weight	89.5	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
17)30-450 9.0ft (B0H0383-15) Soil	**Sampled: 08/17/00 08:57**		**Received: 08/17/00 16:30**						
Dry Weight	88.8	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
)28-395 2ft (B0H0383-16) Soil	**Sampled: 08/17/00 09:10**		**Received: 08/17/00 16:30**						
Dry Weight	88.9	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
)28-395 4.0ft (B0H0383-17) Soil	**Sampled: 08/17/00 09:14**		**Received: 08/17/00 16:30**						
Dry Weight	86.9	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
18)28-395 6.0ft (B0H0383-18) Soil	**Sampled: 08/17/00 09:14**		**Received: 08/17/00 16:30**						
Dry Weight	80.6	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Physical Parameters by APHA/ASTM/EPA Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
18)28-395 8.0ft (B0H0383-19) Soil	Sampled: 08/17/00 09:28	Received: 08/17/00 16:30							
Dry Weight	65.8	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
18)28-395 9.0ft (B0H0383-20) Soil	Sampled: 08/17/00 09:30	Received: 08/17/00 16:30							
Dry Weight	83.2	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
19)25-309 2ft (B0H0383-21) Soil	Sampled: 08/17/00 09:41	Received: 08/17/00 16:30							
Dry Weight	87.0	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
19)25-309 4.0ft (B0H0383-22) Soil	Sampled: 08/17/00 09:43	Received: 08/17/00 16:30							
Dry Weight	84.6	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
19)25-309 6.0ft (B0H0383-23) Soil	Sampled: 08/17/00 09:46	Received: 08/17/00 16:30							
Dry Weight	71.5	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
19)25-309 8.0ft (B0H0383-24) Soil	Sampled: 08/17/00 09:50	Received: 08/17/00 16:30							
Dry Weight	81.1	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
)20-258 2ft (B0H0383-25) Soil	Sampled: 08/17/00 10:00	Received: 08/17/00 16:30							
Dry Weight	82.1	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
20-258 4.0ft (B0H0383-26) Soil	Sampled: 08/17/00 10:03	Received: 08/17/00 16:30							
Dry Weight	73.5	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
20)20-258 6.0ft (B0H0383-27) Soil	Sampled: 08/17/00 10:03	Received: 08/17/00 16:30							
Dry Weight	86.4	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	

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Envirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
20)20-258 8.0ft (B0H0383-28) Soil	**Sampled: 08/17/00 10:10 Received: 08/17/00 16:30**								
Dry Weight	78.0	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
20)20-258 9.4ft (B0H0383-29) Soil	**Sampled: 08/17/00 10:13 Received: 08/17/00 16:30**								
Dry Weight	84.8	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
21)27-206 2ft (B0H0383-30) Soil	**Sampled: 08/17/00 10:29 Received: 08/17/00 16:30**								
Dry Weight	84.6	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
21)27-206 4.0ft (B0H0383-31) Soil	**Sampled: 08/17/00 10:32 Received: 08/17/00 16:30**								
Dry Weight	80.1	1.00	%	1	0H17042	08/17/00	08/18/00	BSOPSPL003R07	
21)27-206 6.0ft (B0H0383-32) Soil	**Sampled: 08/17/00 10:34 Received: 08/17/00 16:30**								
Dry Weight	75.8	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
21)27-206 8.0ft (B0H0383-33) Soil	**Sampled: 08/17/00 10:37 Received: 08/17/00 16:30**								
Dry Weight	80.4	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	
27-206 9.5ft (B0H0383-34) Soil	**Sampled: 08/17/00 10:40 Received: 08/17/00 16:30**								
Dry Weight	79.8	1.00	%	1	0H18037	08/18/00	08/21/00	BSOPSPL003R07	

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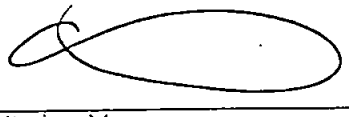

Steve Davis, Project Manager

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H17051: Prepared 08/17/00 Using EPA 3050B										
Blank (0H17051-BLK1)										
Arsenic	ND	0.500	mg/kg wet							
LCS (0H17051-BS1)										
Arsenic	25.2	0.500	mg/kg wet	25.0		101	70-130			
Matrix Spike (0H17051-MS1)					Source: B0H0383-01					
Arsenic	1090	6.06	mg/kg dry	16.2	196	5520	70-130			Q-15
Matrix Spike Dup (0H17051-MSD1)					Source: B0H0383-01					
Arsenic	168	6.67	mg/kg dry	17.8	196	-157	70-130	147	20	Q-15
Batch 0H18043: Prepared 08/18/00 Using EPA 3050B										
Blank (0H18043-BLK1)										
enic	ND	0.500	mg/kg wet							
LCS (0H18043-BS1)										
enic	26.6	0.500	mg/kg wet	25.0		106	70-130			
Matrix Spike (0H18043-MS1)					Source: B0H0383-03					
Arsenic	83.3	0.329	mg/kg dry	17.6	65.5	101	70-130			
Matrix Spike Dup (0H18043-MSD1)					Source: B0H0383-03					
Arsenic	120	0.318	mg/kg dry	17.1	65.5	319	70-130	36.1	20	Q-15

rth Creek Analytical - Bothell

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H17042: Prepared 08/17/00 Using Dry Weight										
Blank (0H17042-BLK1)										
Dry Weight	100	1.00	%							
Batch 0H18036: Prepared 08/18/00 Using Dry Weight										
Blank (0H18036-BLK1)										
Dry Weight	100	1.00	%							
Batch 0H18037: Prepared 08/18/00 Using Dry Weight										
Blank (0H18037-BLK1)										
Dry Weight	100	1.00	%							

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/21/00 15:09

Notes and Definitions

Q-15	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
RPD	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order #: B0H0383

CLIENT: Steffan Jacobson

REPORT TO: David Jacobs
ADDRESS: Environ
10400 N. Bayard Way
Portland, OR 97203

PHONE: 503-285-0164 FAX: 503-285-6215

INVOICE TO: Same as Report

P.O. NUMBER:

PROJECT NAME: Steffan Jacobson
PROJECT NUMBER: 14313
SAMPLED BY: D Turner

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1

STD. Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1

STD. OTHER Please Specify 24 Hr

*Turnaround Requests less than standard may incur Rush Charges

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES: Total Arsenic	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 21) 27-206 4.0 ft	8-17-00 10:32A	X	S	1	24 hr	31
2. 21) 27-206 6.0 ft	8-17-00 10:34A	X	S	1	Hold	32
3. 21) 27-206 8.0 ft	8-17-00 10:37A	X	S	1	"	33
4. 21) 27-206 9.5 ft	8-17-00 10:40A	X	S	1	"	34
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

RELINQUISHED BY:
PRINT NAME: Dirk Turner FIRM: Environ DATE: 8-17-00 TIME:

RECEIVED BY: Cathy Nichols
PRINT NAME: C. Nichols FIRM: NCA DATE: 8/17/00 TIME: 15:40

RELINQUISHED BY:
PRINT NAME: Cathy Nichols FIRM: NCA DATE: 8/17/00 TIME: 16:30

RECEIVED BY:
PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

COC Rev 3/99

TEMP

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CHAIN OF CUSTODY REPORT

Work Order #: BOH0383

CLIENT: Stefan Jacobson
REPORT TO: David Jacobs
Environcon
ADDRESS: 10400 N. Burgard Way
Portland, OR 97203
PHONE: 503-285-6164 FAX: 503-285-6215

INVOICE TO:
Same as Report

P.O. NUMBER:

PROJECT NAME:
PROJECT NUMBER:
SAMPLED BY:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)
Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1 (STD.)
OTHER: Please Specify 24 Hr
*Turnaround Requests less than standard may incur Rush Charges

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES: Total Arsenic	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1.(8) 28-395 2.0ft	8-17-00 9:10A	X	S	1	24hr	-16
2.(8) 28-395 4.0ft	8-17-00 9:14A	X	S	1	"	-17
3.(8) 28-395 6.0ft	8-17-00 9:20A	X	S	1	Hold	-18
4.(8) 28-395 8.0ft	8-17-00 9:28A	X	S	1	"	-19
5.(8) 28-395 9.0ft	8-17-00 9:30A	X	S	1	"	-20
6.(9) 25-309 2.0ft	8-17-00 9:41A	X	S	1	24hr	-21
7.(9) 25-309 4.0ft	8-17-00 9:43A	X	S	1	"	-22
8.(9) 25-309 6.0ft	8-17-00 9:46A	X	S	1	Hold	-23
9.(9) 25-309 8.0ft	8-17-00 9:50A	X	S	1	"	-24
10.(20) 20-258 2.0ft	8-17-00 10:00A	X	S	1	24hr	-25
11.(20) 20-258 4.0ft	8-17-00 10:03A	X	S	1	"	-26
12.(20) 20-258 6.0ft	8-17-00 10:06A	X	S	1	Hold	-27
13.(20) 20-258 8.0ft	8-17-00 10:10A	X	S	1	"	-28
14.(20) 20-258 9.4ft	8-17-00 10:13A	X	S	1	"	-29
15.(21) 27-206 2.0ft	8-17-00 10:29A	X	S	1	24hr	-30

RELINQUISHED BY: PRINT NAME: Derk Timmer FIRM: Environcon DATE: 8-17-00 TIME:
RECEIVED BY: Cathy Nichols PRINT NAME: C. Nichols FIRM: NCA DATE: 8/17/00 TIME: 15:00

RELINQUISHED BY: Cathy Nichols PRINT NAME: C. Nichols FIRM: NCA DATE: 8/17/00 TIME: 16:30
RECEIVED BY: Tony Sprague PRINT NAME: Sprague Tony FIRM: NCA DATE: 8/17/00 TIME: 1630

ADDITIONAL REMARKS:
W/O

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TEM 27.0

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CHAIN OF CUSTODY REPORT

Work Order #: B0H0383

CLIENT: Stetson Jacobson
REPORT TO: Dave Jacobs
Environcon
ADDRESS: 10460 N Borgard Way
Portland, OR 97203
PHONE: 503-285-0164 FAX: 503-285-0215

INVOICE TO: Same as Report
P.O. NUMBER:

PROJECT NAME: Stetson Jacobson
PROJECT NUMBER: 4515
SAMPLED BY: Dirk Turner

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1
STD. Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1
STD. OTHER: 24-hr
*Turnaround Requests less than standard may incur Rush Charges

REQUESTED ANALYSES: Total Arsenic

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Total Arsenic	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. (4) 24-540 2 5ft	8-17-00 7:50A	X	S	1	24hr	01
2. (4) 24-540 4.0ft	8-17-00 7:55A	X	S	1	"	02
3. (4) 24-540 6.0ft	8-17-00 7:58A	X	S	1	Hold	03
4. (4) 24-540 8.0ft	8-17-00 8:00A	X	S	1	"	04
5. (4) 24-540 9.5ft	8-17-00 8:05A	X	S	1	"	05
6. (6) 35-500 2 5ft	8-17-00 8:15A	X	S	1	24hr	06
7. (6) 35-500 4.0ft	8-17-00 8:18A	X	S	1	"	07
8. (6) 35-500 6.0ft	8-17-00 8:21A	X	S	1	Hold	08
9. (6) 35-500 8.0ft	8-17-00 8:25A	X	S	1	"	09
10. (6) 35-500 9.0ft	8-17-00 8:28	X	S	1	"	10
11. (7) 30-450 2 5ft	8-17-00 8:39A	X	S	1	24hr	11
12. (7) 30-450 4.0ft	8-17-00 8:42A	X	S	1	"	12
13. (7) 30-450 6.0ft	8-17-00 8:45A	X	S	1	Hold	13
14. (7) 30-450 8.0ft	8-17-00 8:49	X	S	1	"	14
15. (7) 30-450 9.0ft	8-17-00 8:53	X	S	1	"	15

RELINQUISHED BY: PRINT NAME: Dirk Turner FIRM: Environcon DATE: 8-17-00 TIME:
RECEIVED BY: Cathy Nichols PRINT NAME: FIRM: NCA DATE: 8/17/00 TIME: 15:00

RELINQUISHED BY: Cathy Nichols PRINT NAME: FIRM: NCA DATE: 8/17/00 TIME: 16:30
RECEIVED BY: Tonya PRINT NAME: FIRM: NCA DATE: 8/17/00 TIME: 1630

ADDITIONAL RE[illegible]S: W/O

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nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/29/00 14:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
16) 35-500 10.0 ft.	B0H0526-01	Soil	08/22/00 17:38	08/23/00 15:55
16) 35-500 12.0 ft.	B0H0526-02	Soil	08/22/00 17:44	08/23/00 15:55
18) 28-395 10.0 ft.	B0H0526-03	Soil	08/22/00 17:52	08/23/00 15:55
18) 28-395 12.0 ft.	B0H0526-04	Soil	08/22/00 17:58	08/23/00 15:55
21) 27-206 10.0 ft.	B0H0526-05	Soil	08/22/00 17:15	08/23/00 15:55
21) 27-206 12.0 ft.	B0H0526-06	Soil	08/22/00 17:20	08/23/00 15:55
38) 25-129 9.0 ft.	B0H0526-07	Soil	08/22/00 18:10	08/23/00 15:55
38) 25-129 12.0 ft.	B0H0526-08	Soil	08/22/00 18:15	08/23/00 15:55
39) 60-86 9.0 ft.	B0H0526-09	Soil	08/22/00 18:25	08/23/00 15:55
39) 60-86 12.0 ft.	B0H0526-10	Soil	08/22/00 18:30	08/23/00 15:55
40) 129-423 0.5 ft.	B0H0526-11	Soil	08/23/00 08:16	08/23/00 15:55
41) 129-516 0.5 ft.	B0H0526-12	Soil	08/23/00 08:20	08/23/00 15:55
) 102-445 0.5 ft.	B0H0526-13	Soil	08/23/00 08:23	08/23/00 15:55

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Envirocon
10400 N. Burgard Way
Portland OR/USA, 97203

Project: Steffan Jacobson
Project Number: 14313
Project Manager: Dave Jacobs

Reported:
08/29/00 14:16

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
16) 35-500 10.0 ft. (B0H0526-01) Soil	**Sampled: 08/22/00 17:38**		**Received: 08/23/00 15:55**						
Arsenic	**28.1**	0.318	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
16) 35-500 12.0 ft. (B0H0526-02) Soil	**Sampled: 08/22/00 17:44**		**Received: 08/23/00 15:55**						
Arsenic	**85.1**	0.323	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
18) 28-395 10.0 ft. (B0H0526-03) Soil	**Sampled: 08/22/00 17:52**		**Received: 08/23/00 15:55**						
Arsenic	**4.86**	0.331	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
18) 28-395 12.0 ft. (B0H0526-04) Soil	**Sampled: 08/22/00 17:58**		**Received: 08/23/00 15:55**						
Arsenic	**6.86**	0.309	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
21) 27-206 10.0 ft. (B0H0526-05) Soil	**Sampled: 08/22/00 17:15**		**Received: 08/23/00 15:55**						
Arsenic	**4.00**	0.329	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
21) 27-206 12.0 ft. (B0H0526-06) Soil	**Sampled: 08/22/00 17:20**		**Received: 08/23/00 15:55**						
Arsenic	**297**	0.671	mg/kg dry	2	0H23064	08/23/00	08/24/00	EPA 6020	
3) 25-129 9.0 ft. (B0H0526-07) Soil	**Sampled: 08/22/00 18:10**		**Received: 08/23/00 15:55**						
senic	**172**	1.72	mg/kg dry	5	0H23064	08/23/00	08/24/00	EPA 6020	
38) 25-129 12.0 ft. (B0H0526-08) Soil	**Sampled: 08/22/00 18:15**		**Received: 08/23/00 15:55**						
Arsenic	**2.09**	0.336	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
39) 60-86 9.0 ft. (B0H0526-09) Soil	**Sampled: 08/22/00 18:25**		**Received: 08/23/00 15:55**						
Arsenic	**2.90**	0.321	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	

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'nvirocon 10400 N. Burgard Way Portland OR/USA, 97203	Project: Steffan Jacobson Project Number: 14313 Project Manager: Dave Jacobs	**Reported:** 08/29/00 14:16

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
39) 60-86 12.0 ft. (B0H0526-10) Soil	**Sampled: 08/22/00 18:30**		**Received: 08/23/00 15:55**						
Arsenic	**45.3**	0.327	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
40) 129-423 0.5 ft. (B0H0526-11) Soil	**Sampled: 08/23/00 08:16**		**Received: 08/23/00 15:55**						
Arsenic	**5.81**	0.357	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
41) 129-516 0.5 ft. (B0H0526-12) Soil	**Sampled: 08/23/00 08:20**		**Received: 08/23/00 15:55**						
Arsenic	**16.6**	0.316	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	
42) 102-445 0.5 ft. (B0H0526-13) Soil	**Sampled: 08/23/00 08:23**		**Received: 08/23/00 15:55**						
Arsenic	**11.9**	0.314	mg/kg dry	1	0H23064	08/23/00	08/24/00	EPA 6020	

Steve Davis, Project Manager

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nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/29/00 14:16

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
16) 35-500 10.0 ft. (B0H0526-01) Soil	Sampled: 08/22/00 17:38		Received: 08/23/00 15:55						
Dry Weight	88.5	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
16) 35-500 12.0 ft. (B0H0526-02) Soil	Sampled: 08/22/00 17:44		Received: 08/23/00 15:55						
Dry Weight	91.4	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
18) 28-395 10.0 ft. (B0H0526-03) Soil	Sampled: 08/22/00 17:52		Received: 08/23/00 15:55						
Dry Weight	86.4	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
18) 28-395 12.0 ft. (B0H0526-04) Soil	Sampled: 08/22/00 17:58		Received: 08/23/00 15:55						
Dry Weight	88.2	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
21) 27-206 10.0 ft. (B0H0526-05) Soil	Sampled: 08/22/00 17:15		Received: 08/23/00 15:55						
Dry Weight	89.6	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
21) 27-206 12.0 ft. (B0H0526-06) Soil	Sampled: 08/22/00 17:20		Received: 08/23/00 15:55						
Dry Weight	82.2	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
25-129 9.0 ft. (B0H0526-07) Soil	Sampled: 08/22/00 18:10		Received: 08/23/00 15:55						
y Weight	86.5	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
38) 25-129 12.0 ft. (B0H0526-08) Soil	Sampled: 08/22/00 18:15		Received: 08/23/00 15:55						
Dry Weight	89.5	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
39) 60-86 9.0 ft. (B0H0526-09) Soil	Sampled: 08/22/00 18:25		Received: 08/23/00 15:55						
Dry Weight	83.4	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	

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nvirocon 10400 N. Burgard Way Portland OR/USA, 97203	Project: Steffan Jacobson Project Number: 14313 Project Manager: Dave Jacobs	**Reported:** 08/29/00 14:16

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
39) 60-86 12.0 ft. (B0H0526-10) Soil	**Sampled: 08/22/00 18:30**		**Received: 08/23/00 15:55**						
Dry Weight	90.5	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
40) 129-423 0.5 ft. (B0H0526-11) Soil	**Sampled: 08/23/00 08:16**		**Received: 08/23/00 15:55**						
Dry Weight	93.4	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
41) 129-516 0.5 ft. (B0H0526-12) Soil	**Sampled: 08/23/00 08:20**		**Received: 08/23/00 15:55**						
Dry Weight	91.7	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	
42) 102-445 0.5 ft. (B0H0526-13) Soil	**Sampled: 08/23/00 08:23**		**Received: 08/23/00 15:55**						
Dry Weight	94.1	1.00	%	1	0H23044	08/23/00	08/24/00	BSOPSPL003R07	

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nvirocon
10400 N. Burgard Way
Portland OR/USA, 97203

Project: Steffan Jacobson
Project Number: 14313
Project Manager: Dave Jacobs

Reported:
08/29/00 14:16

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H23064: Prepared 08/23/00 Using EPA 3050B										
Blank (0H23064-BLK1)										
Arsenic	ND	0.500	mg/kg wet							
LCS (0H23064-BS1)										
Arsenic	27.3	0.500	mg/kg wet	25.0		109	70-130			
Matrix Spike (0H23064-MS1)					Source: B0H0526-01					
Arsenic	41.3	0.333	mg/kg dry	18.8	28.1	70.2	70-130			
Matrix Spike Dup (0H23064-MSD1)					Source: B0H0526-01					
Arsenic	48.9	0.342	mg/kg dry	19.4	28.1	107	70-130	16.9	20	

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.nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/29/00 14:16

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H23044: Prepared 08/23/00 Using Dry Weight										
Blank (0H23044-BLK1)										
Dry Weight	99.8	1.00	%							

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Envirocon 10400 N. Burgard Way Portland OR/USA, 97203	Project: Steffan Jacobson Project Number: 14313 Project Manager: Dave Jacobs	**Reported:** 08/29/00 14:16

Notes and Definitions

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
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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CHAIN OF CUSTODY REPORT

Work Order #: B0H0526

CLIENT: Steffen Jacobson
REPORT TO: David Jacobs
Envirocon
ADDRESS: 10100 N Burgard Way
Portland, OR 97203
PHONE: 503 285-6164 FAX: 503-285-6205

INVOICE TO: Same as Report
P.O. NUMBER:

PROJECT NAME: Steffen Jacobson
PROJECT NUMBER: M313
SAMPLED BY: D. Turner

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER — Please Specify: 24 Hr
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES: Total Arsenic

#	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Total Arsenic	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1.	(6) 35-500 10.0ft	8-22-00 5:38P	X	S	1	B0H0526-01	
2.	(6) 35-500 12.0ft	8-22-00 5:44P	X	S	1	-02	
3.	(8) 28-395 10.0ft	8-22-00 5:52P	X	S	1	-03	
4.	(8) 28-395 12.0ft	8-22-00 5:58P	X	S	1	-04	
5.	21) 27-206 10.0ft	8-22-00 5:15P	X	S	1	-05	
6.	21) 27-206 12.0ft	8-22-00 5:20P	X	S	1	-06	
7.	38) 25-129 9.0ft	8-22-00 6:10P	X	S	1	-07	
8.	38) 25-129 12.0ft	8-22-00 6:15P	X	S	1	-08	
9.	39) 60-86 9.0ft	8-22-00 6:25P	X	S	1	-09	
10.	39) 60-86 12.0ft	8-22-00 6:30P	X	S	1	-10	
11.	40) 129-473 0.5ft	8-23-00 8:16A	X	S	1	-11	
12.	41) 129-516 0.5ft	8-23-00 8:20A	X	S	1	-12	
13.	42) 102-445 0.5ft	8-23-00 8:23A	X	S	1	-13	
14.							
15.							

RELINQUISHED BY: [signature] DATE: 8-23-00
PRINT NAME: Dirk Turner FIRM: Envirocon TIME:
RECEIVED BY: [signature] DATE: 8/23
PRINT NAME: FIRM: NCA TIME: 5[illegible]

RELINQUISHED BY: [signature] DATE: 8/23/00
PRINT NAME: PRANY TONTY FIRM: NCA TIME: 1555
RECEIVED BY: Ellen [illegible] DATE: 8-23-[illegible]
PRINT NAME: Ellen T[illegible] FIRM: NCA TIME: 155[illegible]

ADDITIONAL REMARKS: SAMPLES WERE NOT @ 2-6C UPON RECEIPT W/O
TEMP: 21.4
PAGE OF

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Environcon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
#14-24-540-15	B0H0686-01	Soil	08/30/00 11:30	08/30/00 16:10
#14-24-540-12	B0H0686-02	Soil	08/30/00 11:40	08/30/00 16:10
#16-35-500-13	B0H0686-03	Soil	08/30/00 11:57	08/30/00 16:10
#16-35-500-15	B0H0686-04	Soil	08/30/00 12:00	08/30/00 16:10
#17-30-450-12	B0H0686-05	Soil	08/30/00 12:20	08/30/00 16:10
#17-30-450-15	B0H0686-06	Soil	08/30/00 12:25	08/30/00 16:10
#19-25-309-10	B0H0686-07	Soil	08/30/00 12:35	08/30/00 16:10
#19-25-309-12	B0H0686-08	Soil	08/30/00 12:38	08/30/00 16:10
#19-25-309-14	B0H0686-09	Soil	08/30/00 12:40	08/30/00 16:10
#20-20-258-12	B0H0686-10	Soil	08/30/00 12:55	08/30/00 16:10
#20-20-258-14	B0H0686-11	Soil	08/30/00 13:05	08/30/00 16:10
#21-27-206-13	B0H0686-12	Soil	08/30/00 13:55	08/30/00 16:10
39-60-86-13	B0H0686-13	Soil	08/30/00 14:15	08/30/00 16:10

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Envirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
#14-24-540-15 (B0H0686-01) Soil	**Sampled: 08/30/00 11:30 Received: 08/30/00 16:10**								
Arsenic	2.89	0.340	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#14-24-540-12 (B0H0686-02) Soil	**Sampled: 08/30/00 11:40 Received: 08/30/00 16:10**								
Arsenic	6.87	0.325	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#16-35-500-13 (B0H0686-03) Soil	**Sampled: 08/30/00 11:57 Received: 08/30/00 16:10**								
Arsenic	3.01	0.327	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#16-35-500-15 (B0H0686-04) Soil	**Sampled: 08/30/00 12:00 Received: 08/30/00 16:10**								
Arsenic	1.99	0.323	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#17-30-450-12 (B0H0686-05) Soil	**Sampled: 08/30/00 12:20 Received: 08/30/00 16:10**								
Arsenic	3.61	0.331	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#17-30-450-15 (B0H0686-06) Soil	**Sampled: 08/30/00 12:25 Received: 08/30/00 16:10**								
Arsenic	2.35	0.331	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#19-25-309-10 (B0H0686-07) Soil	**Sampled: 08/30/00 12:35 Received: 08/30/00 16:10**								
Arsenic	3.34	0.342	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#19-25-309-12 (B0H0686-08) Soil	**Sampled: 08/30/00 12:38 Received: 08/30/00 16:10**								
Arsenic	2.24	0.325	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#19-25-309-14 (B0H0686-09) Soil	**Sampled: 08/30/00 12:40 Received: 08/30/00 16:10**								
Arsenic	2.15	0.333	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	

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Envirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
#20-20-258-12 (B0H0686-10) Soil	**Sampled: 08/30/00 12:55 Received: 08/30/00 16:10**								
Arsenic	**2.06**	0.325	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#20-20-258-14 (B0H0686-11) Soil	**Sampled: 08/30/00 13:05 Received: 08/30/00 16:10**								
Arsenic	**2.58**	0.323	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#21-27-206-13 (B0H0686-12) Soil	**Sampled: 08/30/00 13:55 Received: 08/30/00 16:10**								
Arsenic	**2.75**	0.329	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	
#39-60-86-13 (B0H0686-13) Soil	**Sampled: 08/30/00 14:15 Received: 08/30/00 16:10**								
Arsenic	**6.96**	0.333	mg/kg dry	1	0H30041	08/30/00	08/31/00	EPA 6020	

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nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
#14-24-540-15 (B0H0686-01) Soil	**Sampled: 08/30/00 11:30 Received: 08/30/00 16:10**								
Dry Weight	88.1	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#14-24-540-12 (B0H0686-02) Soil	**Sampled: 08/30/00 11:40 Received: 08/30/00 16:10**								
Dry Weight	90.3	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#16-35-500-13 (B0H0686-03) Soil	**Sampled: 08/30/00 11:57 Received: 08/30/00 16:10**								
Dry Weight	93.0	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#16-35-500-15 (B0H0686-04) Soil	**Sampled: 08/30/00 12:00 Received: 08/30/00 16:10**								
Dry Weight	92.4	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#17-30-450-12 (B0H0686-05) Soil	**Sampled: 08/30/00 12:20 Received: 08/30/00 16:10**								
Dry Weight	88.9	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#17-30-450-15 (B0H0686-06) Soil	**Sampled: 08/30/00 12:25 Received: 08/30/00 16:10**								
Weight	89.4	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
25-309-10 (B0H0686-07) Soil	Sampled: 08/30/00 12:35 Received: 08/30/00 16:10								
y Weight	82.4	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#19-25-309-12 (B0H0686-08) Soil	**Sampled: 08/30/00 12:38 Received: 08/30/00 16:10**								
Dry Weight	89.8	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#19-25-309-14 (B0H0686-09) Soil	**Sampled: 08/30/00 12:40 Received: 08/30/00 16:10**								
Dry Weight	93.4	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	

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nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
#20-20-258-12 (B0H0686-10) Soil	Sampled: 08/30/00 12:55 Received: 08/30/00 16:10								
Dry Weight	90.2	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#20-20-258-14 (B0H0686-11) Soil	Sampled: 08/30/00 13:05 Received: 08/30/00 16:10								
Dry Weight	89.4	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#21-27-206-13 (B0H0686-12) Soil	Sampled: 08/30/00 13:55 Received: 08/30/00 16:10								
Dry Weight	88.3	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	
#39-60-86-13 (B0H0686-13) Soil	Sampled: 08/30/00 14:15 Received: 08/30/00 16:10								
Dry Weight	90.3	1.00	%	1	0H30033	08/30/00	08/31/00	BSOPSPL003R07	

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'nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H30041: Prepared 08/30/00 Using EPA 3050B										
Blank (0H30041-BLK1)										
Arsenic	ND	0.500	mg/kg wet							
LCS (0H30041-BS1)										
Arsenic	25.5	0.500	mg/kg wet	25.0		102	70-130			
Matrix Spike (0H30041-MS1)					Source: B0H0686-01					
Arsenic	22.0	0.331	mg/kg dry	18.8	2.89	102	70-130			
Matrix Spike Dup (0H30041-MSD1)					Source: B0H0686-01					
Arsenic	22.6	0.336	mg/kg dry	19.1	2.89	103	70-130	2.69	20	

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'nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H30033: Prepared 08/30/00 Using Dry Weight										
Blank (0H30033-BLK1)										
Dry Weight	100	1.00	%							

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'nvirocon	Project: Steffan Jacobson	
10400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	08/31/00 15:36

Notes and Definitions

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
RPD	Relative Percent Difference

Steve Davis, Project Manager

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Environmental Laboratory Network
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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: BOH0086

CLIENT: ENVIROCON

REPORT TO: DAVID JACOBS

ADDRESS: 10400 N BURGARD WAY

PHONE: 503-285-6164 FAX: 503-285-6205

INVOICE TO: SAME AS ROJECT

P.O. NUMBER:

PROJECT NAME: Steffen Jacobson

PROJECT NUMBER: 1413

SAMPLED BY: DBJ

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)

Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1 (STD.)

OTHER — Please Specify

*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES: TOTAL ARSENIC	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. #14-24-540-15	8/30/00 11:30	X	S	1	GRAY SILTY	01
2. #14-24-540-12	8/30/00 11:40	X			BROWN SANDY	02
3. #16-35-500-13	8/30/00 11:57	X			BROWN SANDY	03
4. #16-35-500-15	8/30/00 12:00	X			GRAY SILTY	04
5. #17-30-450-12	8/30/00 12:20	X			BROWN SANDY	05
6. #17-30-450-15	8/30/00 12:25	X			GRAY SILTY	06
7. #19-25-309-10	8/30/00 12:35	X			BROWN	07
8. #19-25-309-12	8/30/00 12:38	X			GRAY	08
9. #19-25-309-14	8/30/00 12:40	X			GRAY	09
10. #20-20-258-12	8/30/00 12:55	X			GRAY	10
11. #20-20-258-14	8/30/00 1:05	X			GRAY	11
12. #21-27-206-13	8/30/00 1:55	X			GRAY	12
13. #39-60-66-13	8/30/00 2:15	X			GRAY	13
14.						
15.						

SAMPLES WERE NOT @ 2-6C UPON RECEIPT

RELINQUISHED BY: DAVID JACOBS — FIRM: ENVIROCON — DATE: 8/30/00 — TIME: 3:30

RECEIVED BY: Cathy Mitchell — PRINT NAME: C. Mitchell — FIRM: NCA — DATE: 8/30/00 — TIME: 15:30

RELINQUISHED BY: Cathy Mitchell — PRINT NAME: C. Mitchell — FIRM: NCA — DATE: 8/30/00 — TIME: 16:10

RECEIVED BY: Karla Kaczorowski — PRINT NAME: Karla Kaczorowski — FIRM: NCA — DATE: 8/30/00 — TIME: 16:10

ADDITIONAL REMARKS:

w/o

TEMP: 19.9°

PAGE ___ OF ___

PROFILE SAMPLING

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Envirocon	Project: Steffan Jacobson	
3400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
27-206-.5	B0J0508-01	Soil	10/19/00 14:50	10/20/00 09:52
27-206-1	B0J0508-02	Soil	10/19/00 14:50	10/20/00 09:52
20-258-.5	B0J0508-03	Soil	10/19/00 15:00	10/20/00 09:52
20-258-1	B0J0508-04	Soil	10/19/00 15:00	10/20/00 09:52
25-309-.5	B0J0508-05	Soil	10/19/00 15:10	10/20/00 09:52
25-309-1	B0J0508-06	Soil	10/19/00 15:10	10/20/00 09:52
28-395-.5	B0J0508-07	Soil	10/19/00 15:20	10/20/00 09:52
28-395-1	B0J0508-08	Soil	10/19/00 15:20	10/20/00 09:52
30-450-.5	B0J0508-09	Soil	10/19/00 15:30	10/20/00 09:52
30-450-1	B0J0508-10	Soil	10/19/00 15:30	10/20/00 09:52

Amar Gill, Project Manager

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
27-206-.5 (B0J0508-01) Soil Sampled: 10/19/00 14:50 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	**57.2**	10.0	mg/kg dry	1	0J25027	10/25/00	10/27/00	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**132**	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*99.2 %*	*50-150*			"	"	"	"	
27-206-1 (B0J0508-02) Soil Sampled: 10/19/00 14:50 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	**137**	50.0	mg/kg dry	5	0J25027	10/25/00	10/26/00	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**195**	125	"	"	"	"	"	"	
Surrogate: 2-FBP	*55.8 %*	*50-150*			"	"	"	"	
20-258-.5 (B0J0508-03) Soil Sampled: 10/19/00 15:00 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	**116**	10.0	mg/kg dry	1	0J25027	10/25/00	10/27/00	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**156**	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*85.1 %*	*50-150*			"	"	"	"	
)-258-1 (B0J0508-04) Soil Sampled: 10/19/00 15:00 Received: 10/20/00 09:52									
iesel Range Hydrocarbons	**68.5**	50.0	mg/kg dry	5	0J25027	10/25/00	10/26/00	NWTPH-Dx	
ube Oil Range Hydrocarbons	**179**	125	"	"	"	"	"	"	
rogate: 2-FBP	*50.8 %*	*50-150*			"	"	"	"	
25-309-.5 (B0J0508-05) Soil Sampled: 10/19/00 15:10 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	**36.1**	10.0	mg/kg dry	1	0J25027	10/25/00	10/27/00	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**63.2**	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*90.1 %*	*50-150*			"	"	"	"	
25-309-1 (B0J0508-06) Soil Sampled: 10/19/00 15:10 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	ND	50.0	mg/kg dry	5	0J25027	10/25/00	10/26/00	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**179**	125	"	"	"	"	"	"	
Surrogate: 2-FBP	*56.7 %*	*50-150*			"	"	"	"	

Amar Gill, Project Manager

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Envirocon 3400 N. Burgard Way Portland OR/USA, 97203	Project: Steffan Jacobson Project Number: 14313 Project Manager: Dave Jacobs	Reported: 10/31/00 14:00

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
28-395-.5 (B0J0508-07) Soil Sampled: 10/19/00 15:20 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	101	30.0	mg/kg dry	3	0J25027	10/25/00	10/27/00	NWTPH-Dx	D-09
Lube Oil Range Hydrocarbons	323	75.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*74.7 %*	*50-150*			"	"	"	"	
28-395-1 (B0J0508-08) Soil Sampled: 10/19/00 15:20 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	134	110	mg/kg dry	11	0J25027	10/25/00	10/26/00	NWTPH-Dx	D-09
Lube Oil Range Hydrocarbons	450	275	"	"	"	"	10/27/00	"	
Surrogate: 2-FBP	*59.1 %*	*50-150*			"	"	"	"	*S-05*
30-450-.5 (B0J0508-09) Soil Sampled: 10/19/00 15:30 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	106	10.0	mg/kg dry	1	0J25027	10/25/00	10/27/00	NWTPH-Dx	D-09
Lube Oil Range Hydrocarbons	245	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*86.4 %*	*50-150*			"	"	"	"	
-450-1 (B0J0508-10) Soil Sampled: 10/19/00 15:30 Received: 10/20/00 09:52									
Diesel Range Hydrocarbons	ND	110	mg/kg dry	11	0J25027	10/25/00	10/26/00	NWTPH-Dx	
Lube Oil Range Hydrocarbons	312	275	"	"	"	"	"	"	
rogate: 2-FBP	*54.1 %*	*50-150*			"	"	"	"	

Anna Gill, Project Manager

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
27-206-.5 (B0J0508-01) Soil Sampled: 10/19/00 14:50 Received: 10/20/00 09:52									
Silver	1.12	0.323	mg/kg dry	1	0J20035	10/20/00	10/23/00	EPA 6020	
Arsenic	299	3.23	"	10	"	"	10/24/00	"	
Barium	232	32.3	"	"	"	"	"	"	
Cadmium	0.718	0.323	"	1	"	"	10/23/00	"	
Chromium	31.0	0.323	"	"	"	"	10/24/00	"	
Mercury	1.93	0.400	"	4	0J20045	10/20/00	10/23/00	EPA 7471A	
Lead	786	3.23	"	10	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	0.660	0.323	"	1	"	"	10/23/00	"	
27-206-1 (B0J0508-02) Soil Sampled: 10/19/00 14:50 Received: 10/20/00 09:52									
Silver	1.18	0.350	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	293	3.50	"	10	"	"	10/24/00	"	
Barium	339	35.0	"	"	"	"	"	"	
Cadmium	1.07	0.350	"	1	"	"	10/24/00	"	
Chromium	45.2	0.350	"	"	"	"	10/24/00	"	
Mercury	0.356	0.100	"	"	0J20045	10/20/00	10/23/00	EPA 7471A	
Lead	830	3.50	"	10	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	0.812	0.350	"	1	"	"	10/24/00	"	
20-258-.5 (B0J0508-03) Soil Sampled: 10/19/00 15:00 Received: 10/20/00 09:52									
Silver	1.06	0.347	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	299	3.47	"	10	"	"	10/24/00	"	
Barium	272	34.7	"	"	"	"	"	"	
Cadmium	0.961	0.347	"	1	"	"	10/24/00	"	
Chromium	37.1	0.347	"	"	"	"	10/24/00	"	
Mercury	1.91	0.200	"	2	0J20045	10/20/00	10/23/00	EPA 7471A	
Lead	1030	3.47	"	10	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	0.808	0.347	"	1	"	"	10/24/00	"	

Amar Gill, Project Manager

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l Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
20-258-1 (B0J0508-04) Soil Sampled: 10/19/00 15:00 Received: 10/20/00 09:52									
Silver	0.850	0.333	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	587	3.33	"	10	"	"	10/24/00	"	
Barium	321	33.3	"	"	"	"	"	"	
Cadmium	1.11	0.333	"	1	"	"	10/24/00	"	
Chromium	52.7	0.333	"	"	"	"	10/24/00	"	
Mercury	2.39	0.400	"	4	0J20045	10/20/00	10/23/00	EPA 7471A	
Lead	476	3.33	"	10	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	0.864	0.333	"	1	"	"	10/24/00	"	
25-309-.5 (B0J0508-05) Soil Sampled: 10/19/00 15:10 Received: 10/20/00 09:52									
Silver	0.474	0.327	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	125	0.327	"	"	"	"	"	"	
Barium	104	3.27	"	"	"	"	"	"	
Cadmium	0.602	0.327	"	"	"	"	"	"	
;romium	28.4	0.327	"	"	"	"	10/24/00	"	
..rcury	1.96	0.200	"	2	0J20045	10/20/00	10/23/00	EPA 7471A	
' ad	233	1.63	"	5	0J20035	10/20/00	10/24/00	EPA 6020	
enium	0.449	0.327	"	1	"	"	10/24/00	"	
25-309-1 (B0J0508-06) Soil Sampled: 10/19/00 15:10 Received: 10/20/00 09:52									
Silver	4.31	0.325	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	288	3.25	"	10	"	"	10/24/00	"	
Barium	540	32.5	"	"	"	"	"	"	
Cadmium	1.77	0.325	"	1	"	"	10/24/00	"	
Chromium	33.1	0.325	"	"	"	"	10/24/00	"	
Mercury	2.33	0.400	"	4	0J20045	10/20/00	10/24/00	EPA 7471A	
Lead	2190	16.2	"	50	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	0.873	0.325	"	1	"	"	10/24/00	"	

Amar Gill, Project Manager

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Envirocon
0400 N. Burgard Way
Portland OR/USA, 97203

Project: Steffan Jacobson
Project Number: 14313
Project Manager: Dave Jacobs

Reported:
10/31/00 14:00

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
28-395-.5 (B0J0508-07) Soil	**Sampled: 10/19/00 15:20**	**Received: 10/20/00 09:52**							
Silver	0.884	0.352	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	240	3.52	"	10	"	"	10/24/00	"	
Barium	180	3.52	"	1	"	"	10/24/00	"	
Cadmium	0.795	0.352	"	"	"	"	"	"	
Chromium	27.5	0.352	"	"	"	"	10/24/00	"	
Mercury	5.13	1.00	"	10	0J20045	10/20/00	10/24/00	EPA 7471A	
Lead	450	3.52	"	"	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	1.03	0.352	"	1	"	"	10/24/00	"	
28-395-1 (B0J0508-08) Soil	**Sampled: 10/19/00 15:20**	**Received: 10/20/00 09:52**							
Silver	1.76	0.329	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	163	0.329	"	"	"	"	"	"	
Barium	271	16.4	"	5	"	"	10/24/00	"	
Cadmium	0.783	0.329	"	1	"	"	10/24/00	"	
Chromium	24.2	0.329	"	"	"	"	10/24/00	"	
Mercury	4.77	1.00	"	10	0J20045	10/20/00	10/24/00	EPA 7471A	
Lead	980	3.29	"	"	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	0.695	0.329	"	1	"	"	10/24/00	"	
30-450-.5 (B0J0508-09) Soil	**Sampled: 10/19/00 15:30**	**Received: 10/20/00 09:52**							
Silver	1.96	0.331	mg/kg dry	1	0J20035	10/20/00	10/24/00	EPA 6020	
Arsenic	202	3.31	"	10	"	"	10/24/00	"	
Barium	407	33.1	"	"	"	"	"	"	
Cadmium	0.843	0.331	"	1	"	"	10/24/00	"	
Chromium	30.3	0.331	"	"	"	"	10/24/00	"	
Mercury	10.2	2.00	"	20	0J20045	10/20/00	10/24/00	EPA 7471A	
Lead	1080	3.31	"	10	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	1.01	0.331	"	1	"	"	10/24/00	"	

Amar Gill, Project Manager

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
30-450-1 (B0J0508-10) Soil Sampled: 10/19/00 15:30 Received: 10/20/00 09:52									
Silver	**0.894**	0.342	mg/kg dry	1	0J20035	10/20/00	10/23/00	EPA 6020	
Arsenic	**115**	0.342	"	"	"	"	"	"	
Barium	**217**	34.2	"	10	"	"	10/24/00	"	
Cadmium	**0.636**	0.342	"	1	"	"	10/23/00	"	
Chromium	**30.4**	0.342	"	"	"	"	10/24/00	"	
Mercury	**1.55**	0.200	"	2	0J20045	10/20/00	10/24/00	EPA 7471A	
Lead	**575**	3.42	"	10	0J20035	10/20/00	10/24/00	EPA 6020	
Selenium	**0.842**	0.342	"	1	"	"	10/23/00	"	

Amar Gill, Project Manager

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
27-206-.5 (B0J0508-01) Soil Sampled: 10/19/00 14:50 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/27/00	EPA 6010B	
Lead	**0.517**	0.200	"	"	"	"	10/27/00	"	
27-206-1 (B0J0508-02) Soil Sampled: 10/19/00 14:50 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/27/00	EPA 6010B	
Lead	**0.243**	0.200	"	"	"	"	10/27/00	"	
20-258-.5 (B0J0508-03) Soil Sampled: 10/19/00 15:00 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/30/00	EPA 6010B	
Lead	**0.293**	0.200	"	"	"	"	"	"	
20-258-1 (B0J0508-04) Soil Sampled: 10/19/00 15:00 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/30/00	EPA 6010B	
Lead	**0.219**	0.200	"	"	"	"	10/30/00	"	
309-1 (B0J0508-06) Soil Sampled: 10/19/00 15:10 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/30/00	EPA 6010B	
Lead	**0.824**	0.200	"	"	"	"	"	"	
395-.5 (B0J0508-07) Soil Sampled: 10/19/00 15:20 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/30/00	EPA 6010B	
Mercury	ND	0.00100	"	"	0J27016	10/27/00	10/30/00	EPA 7470A	
Lead	**0.230**	0.200	"	"	0J26033	10/26/00	10/30/00	EPA 6010B	
28-395-1 (B0J0508-08) Soil Sampled: 10/19/00 15:20 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/30/00	EPA 6010B	
Mercury	ND	0.00100	"	"	0J27016	10/27/00	10/30/00	EPA 7470A	
Lead	0.289	0.200	"	"	0J26033	10/26/00	10/30/00	EPA 6010B	

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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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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

TCLP Metals by EPA 1311/6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
30-450-.5 (B0J0508-09) Soil Sampled: 10/19/00 15:30 Received: 10/20/00 09:52									
Arsenic	ND	0.500	mg/l	1	0J26033	10/26/00	10/30/00	EPA 6010B	
Mercury	ND	0.00100	"	"	0J27016	10/27/00	10/30/00	EPA 7470A	
Lead	**0.801**	0.200	"	"	0J26033	10/26/00	10/30/00	EPA 6010B	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
27-206-.5 (B0J0508-01) Soil	**Sampled: 10/19/00 14:50**	**Received: 10/20/00 09:52**							
Dry Weight	82.3	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
27-206-1 (B0J0508-02) Soil	**Sampled: 10/19/00 14:50**	**Received: 10/20/00 09:52**							
Dry Weight	79.7	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
20-258-.5 (B0J0508-03) Soil	**Sampled: 10/19/00 15:00**	**Received: 10/20/00 09:52**							
Dry Weight	86.7	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
20-258-1 (B0J0508-04) Soil	**Sampled: 10/19/00 15:00**	**Received: 10/20/00 09:52**							
Dry Weight	85.6	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
25-309-.5 (B0J0508-05) Soil	**Sampled: 10/19/00 15:10**	**Received: 10/20/00 09:52**							
Dry Weight	75.3	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
25-309-1 (B0J0508-06) Soil	**Sampled: 10/19/00 15:10**	**Received: 10/20/00 09:52**							
Dry Weight	86.6	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
)95-.5 (B0J0508-07) Soil	Sampled: 10/19/00 15:20	Received: 10/20/00 09:52							
Dry Weight	70.6	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
-395-1 (B0J0508-08) Soil	Sampled: 10/19/00 15:20	Received: 10/20/00 09:52							
Dry Weight	79.8	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	
30-450-.5 (B0J0508-09) Soil	**Sampled: 10/19/00 15:30**	**Received: 10/20/00 09:52**							
Dry Weight	85.0	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
30-450-1 (B0J0508-10) Soil	**Sampled: 10/19/00 15:30**	**Received: 10/20/00 09:52**							
Dry Weight	86.2	1.00	%	1	0J20036	10/20/00	10/21/00	BSOPSPL003R07	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0J25027: Prepared 10/25/00 Using EPA 3550B										
Blank (0J25027-BLK1)										
Diesel Range Hydrocarbons	ND	10.0	mg/kg wet							
Lube Oil Range Hydrocarbons	ND	25.0	"							
Surrogate: 2-FBP	*10.2*		"	*10.7*		*95.3*	*50-150*			
LCS (0J25027-BS1)										
Diesel Range Hydrocarbons	64.1	10.0	mg/kg wet	66.7		96.1	60-140			
Surrogate: 2-FBP	*8.61*		"	*10.7*		*80.5*	*50-150*			
Duplicate (0J25027-DUP1)					**Source: B0J0621-05**					
Diesel Range Hydrocarbons	9940	410	mg/kg dry		9730			2.14	50	
Lube Oil Range Hydrocarbons	ND	1030	"		ND			11.3	50	
Surrogate: 2-FBP	*0*		"	*11.6*			*50-150*			*S-05*
Surrogate: Octacosane	*9.62*		"	*11.6*		*82.9*	*50-150*			
Duplicate (0J25027-DUP2)					**Source: B0J0621-06**					
Diesel Range Hydrocarbons	8570	410	mg/kg dry		6530			27.0	50	
Lube Oil Range Hydrocarbons	ND	1030	"		ND			8.37	50	
Surrogate: 2-FBP	*0*		"	*14.0*			*50-150*			*S-05*
Surrogate: Octacosane	*11.4*		"	*14.0*		*81.4*	*50-150*			

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0J20035: Prepared 10/20/00 Using EPA 3050B										
Blank (0J20035-BLK1)										
Arsenic	ND	0.500	mg/kg wet							
Barium	ND	5.00	"							
Cadmium	ND	0.500	"							
Chromium	ND	0.500	"							
Lead	ND	0.500	"							
Selenium	ND	0.500	"							
Silver	ND	0.500	"							
LCS (0J20035-BS1)										
Arsenic	26.2	0.500	mg/kg wet	25.0		105	70-130			
Barium	25.5	5.00	"	25.0		102	80-120			
Cadmium	25.3	0.500	"	25.0		101	70-130			
;romium	24.9	0.500	"	25.0		99.6	80-120			
Lead	25.2	0.500	"	25.0		101	80-120			
lenium	26.1	0.500	"	25.0		104	70-130			
ver	25.3	0.500	"	25.0		101	40-130			
Matrix Spike (0J20035-MS1)					Source: B0J0508-01					
Arsenic	457	3.45	mg/kg dry	21.0	299	752	70-130			Q-15
Barium	379	34.5	"	21.0	232	700	70-130			Q-15
Cadmium	21.3	0.345	"	21.0	0.718	98.0	70-130			
Chromium	66.6	0.345	"	21.0	31.0	170	70-130			Q-14
Lead	980	3.45	"	21.0	786	924	70-130			Q-15
Selenium	21.5	0.345	"	21.0	0.660	99.2	70-130			
Silver	18.7	0.345	"	21.0	1.12	83.7	40-130			
Matrix Spike Dup (0J20035-MSD1)					Source: B0J0508-01					
Arsenic	399	3.31	mg/kg dry	20.1	299	498	70-130	13.6	20	Q-15
Barium	583	33.1	"	20.1	232	1750	70-130	42.4	20	Q-15
Cadmium	19.8	0.331	"	20.1	0.718	94.9	70-130	7.30	20	
Chromium	73.4	0.331	"	20.1	31.0	211	70-130	9.71	20	Q-14
Lead	2510	6.62	"	20.1	786	8580	70-130	87.7	20	Q-15
Selenium	19.3	0.331	"	20.1	0.660	92.7	70-130	10.8	20	
Silver	18.8	0.331	"	20.1	1.12	88.0	40-130	0.533	50	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0J20045: Prepared 10/20/00 Using EPA 7471A										
Blank (0J20045-BLK1)										
Mercury	ND	0.100	mg/kg wet							
LCS (0J20045-BS1)										
Mercury	0.524	0.100	mg/kg wet	0.500		105	80-120			
Matrix Spike (0J20045-MS1)					**Source: B0J0508-01**					
Mercury	2.37	0.400	mg/kg dry	0.603	1.93	73.0	80-120			Q-1
Matrix Spike Dup (0J20045-MSD1)					**Source: B0J0508-01**					
Mercury	2.28	0.400	mg/kg dry	0.598	1.93	58.5	80-120	3.87	20	Q-1

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	Reported:
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

TCLP Metals by EPA 1311/6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0J26033: Prepared 10/26/00 Using EPA 3010A										
Blank (0J26033-BLK1)										
Arsenic	ND	0.500	mg/l							
Lead	ND	0.200	"							
LCS (0J26033-BS1)										
Arsenic	10.5	0.500	mg/l	10.0		105	80-120			
Lead	11.1	0.200	"	10.0		111	80-120			
Matrix Spike (0J26033-MS1)					Source: B0J0225-01					
Arsenic	10.6	0.500	mg/l	10.0	ND	106	80-120			
Lead	12.4	0.200	"	10.0	1.50	109	80-120			
Matrix Spike Dup (0J26033-MSD1)					Source: B0J0225-01					
Arsenic	10.7	0.500	mg/l	10.0	ND	107	80-120	0.939	20	
ıd	12.4	0.200	"	10.0	1.50	109	80-120	0	20	
Batch 0J27016: Prepared 10/27/00 Using EPA 7470A TCLP										
ınk (0J27016-BLK1)										
Mercury	ND	0.00100	mg/l							
LCS (0J27016-BS1)										
Mercury	0.00522	0.00100	mg/l	0.00500		104	70-130			
Matrix Spike (0J27016-MS1)					Source: B0J0508-09					
Mercury	0.00527	0.00100	mg/l	0.00500	ND	105	75-125			
Matrix Spike Dup (0J27016-MSD1)					Source: B0J0508-09					
Mercury	0.00529	0.00100	mg/l	0.00500	ND	106	75-125	0.379	20	

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0J20036: Prepared 10/20/00 Using Dry Weight										
Blank (0J20036-BLK1)										
Dry Weight	100	1.00	%							

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Envirocon	Project: Steffan Jacobson	
0400 N. Burgard Way	Project Number: 14313	**Reported:**
Portland OR/USA, 97203	Project Manager: Dave Jacobs	10/31/00 14:00

Notes and Definitions

D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
Q-14	Visual examination indicates the RPD and/or matrix spike recovery is outside the control limit due to a non-homogeneous sample matrix.
Q-15	Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level.
S-05	Due to interference from coeluting organic compounds with the primary surrogate, results of the secondary surrogate have been used to control the analysis.
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
RPD	Relative Percent Difference

Amar Gill, Project Manager

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CHAIN OF CUSTODY REPORT

Work Order #: B0J0508

CLIENT: Steffen Jacobson
REPORT TO: Envirocon
ADDRESS: 10400 North Burgard Way, Portland OR 97203
PHONE:
FAX:
INVOICE TO:
P.O. NUMBER:
PROJECT NAME: Jacobson
PROJECT NUMBER: 14313
SAMPLED BY: Steve Shepherd

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 ~~2~~ 1 <1
Petroleum Hydrocarbon Analyses: ~~5~~ (STD.) 4 3 2 1 <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	6020 RCRA 8	NW-Dx ~~EPA~~	TCLP for Lead-Arsenic										MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1.	14313	10-19-00 14:50	X	X	(X)											*	2 day on RCRA 8	
2.	14313	10-19-00 14:50	X	X	(X)												6020	
3.	14313	10-19-00 15:00	X	X	(X)											*	5 day on NW-Dx	
4.	14313	10-19-00 15:00	X	X	(X)													
5.	14313	10-19-00 15:10	X	X	(X)													
6.	14313	10-19-00 15:10	X	X	(X)													
7.	14313	10-19-00 15:20	X	X	(X)													
8.	14313	10-19-00 15:20	X	X	(X)													
9.	14313	10-19-00 15:30	X	X	(X)													
10.	14313	10-19-00 15:30	X	X	(X)													
11.																		
12.																		
13.																		
14.																		
15.																		

RELINQUISHED BY: [signature] PRINT NAME: Steve Shepherd FIRM: Envirocon	DATE: 10-19-00 TIME: 16:00	RECEIVED BY: [signature] PRINT NAME: Steve Davis FIRM: NCA-B	DATE: 10/19 TIME: 16:00
RELINQUISHED BY: PRINT NAME: FIRM:	DATE: TIME:	RECEIVED BY: [signature] PRINT NAME: Karla Kaczorowski FIRM: NCA-B	DATE: 10/19/00 TIME: 18:02

ADDITIONAL REMARKS: (X) Hold TCLP for Total Results

TEMP: 20.8°

PAGE OF

COC REV 3/99

NCA™ North Creek Analytical, Inc. Environmental Laboratory Network www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223 (425) 420-9200 FAX 420-9210
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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: B0J0508

CLIENT: Steffen Jacobson
REPORT TO: Envirocon
ADDRESS: 10400 North Burgard Way, Portland OR 97203
PHONE: FAX:
INVOICE TO:
P.O. NUMBER:
PROJECT NAME: Jacobson
PROJECT NUMBER: 14313
SAMPLED BY: Steve Shepherd

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 7 5 4 3 [2 - marked X] 1 <1 (STD.)
Petroleum Hydrocarbon Analyses: [5 - marked X] 4 3 2 1 <1 (STD.)
OTHER — Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES: 8020 RCRA 8; NW-TPH-Dx; TCLP for Lead-Arsenic

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8020 RCRA 8	NW-TPH-Dx	TCLP for Lead-Arsenic									MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 14313	10-19-00 14:50	X	X	(X)	27-206-.5				B0J0508-01					✱	2 day on RCRA 8 8020	
2. 14313	10-19-00 14:50	X	X	(X)	27-206-1				-02							
3. 14313	10-19-00 15:00	X	X	(X)	20-258-.5				-03					✱	5 day on NW-Dx	
4. 14313	10-19-00 15:00	X	X	(X)	20-258-1				-04							
5. 14313	10-19-00 15:10	X	X	(X)	25-309-.5				-05							
6. 14313	10-19-00 15:10	X	X	(X)	25-309-1				-06							
7. 14313	10-19-00 15:20	X	X	(X)	28-395-.5				-07							
8. 14313	10-19-00 15:20	X	X	(X)	28-395-1				-08							
9. 14313	10-19-00 15:30	X	X	(X)	30-450-.5				-09							
10. 14313	10-19-00 15:30	X	X	(X)	30-450-1				-10							
11.																
12.																
13.																
14.																
15.																

RELINQUISHED BY: [signature] DATE: 10-19-00
PRINT NAME: Steve Shepherd FIRM: Envirocon TIME: 16:00
RECEIVED BY: [signature] DATE: 10/19
PRINT NAME: Steve Davis FIRM: NCA-B TIME: 16:00

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: [signature] DATE: 10/19/00
PRINT NAME: Karla Kaczorowski FIRM: NCA-B TIME: 18:02

ADDITIONAL REMARKS: (X) Hold TCLP for Total Results

TEMP: 20.8°   PAGE OF

COC REV 3/99

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Environmental Laboratory Network
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9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9... FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: STEFFEN JACOBSON

REPORT TO: ENVIROCON

ADDRESS: 10400 NORTH BURGARD WAY. PORTLAND OR 97203

PHONE: FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: JACOBSON

PROJECT NUMBER: 14313

SAMPLED BY: STEVE SHERHERD

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1

STD. Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1

STD. OTHER Please Specify

*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES: RCRA 8	CPH	TCLP for Lead - Arsenic										MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 14313	10-14-00 14:50	X	X	X													
2. 14313	10-14-00 14:50.	X	X	X													
3. 14313	10-14-00 15:00	X	X	X													
4. 14313	10-14-00 15:00	X	X	X													
5. 14313	10-14-00 15:10	X	X	X													
6. 14313	10-14-00 15:10	X	X	X													
7. 14313	10-14-00 15:20	X	X	X													
8. 14313	10-14-00 15:20	X	X	X													
9. 14313	10-14-00 15:30	X	X	X													
10. 14313	10-14-00 15:30	X	X	X													
11.																	
12.																	
13.																	
14.																	
15.																	

RELINQUISHED BY: PRINT NAME: STEVE SHERHERD FIRM: ENVIROCON DATE: 10-19-00 TIME: 16:00

RECEIVED BY: PRINT NAME: FIRM: NCA DATE: 10/17 TIME: 16:00

RELINQUISHED BY: PRINT NAME: FIRM: DATE: TIME:

RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP:

PAGE OF

APPENDIX II

DUST CONTROL AND SPILL PREVENTION PROTOCOL

APPENDIX II DUST CONTROL AND SPILL PREVENTION PROTOCOL

1.0 - Dust Suppression & Emission Control Measures

Dust suppression will be provided throughout the duration of the project in order that the ambient air control standards set for the site are achieved. Areas of concern will include, but not be limited to:

a. Soil excavation
b. Soil transfer on-site
c. Soil stockpiles
d. Soil transfer offsite

Suppression of particulate matter will be accomplished at the above areas by the use of water sprays and mists, and dust suppression solutions such as magnesium chloride to ensure the ambient air control standards are not exceeded. The misters and sprinklers shall be installed on soil stockpiles, as needed, to retard the generation of dust. Water hoses on vehicles used for dust suppression on travel routes will be equipped with fogger applicators to maximize suppression and minimize water. Vehicles traveling in the Exclusion Zone (EZ), or the Contamination Reduction Zone (CZ), will be required to travel at a speed of ten (10) miles per hour or below.

1.1 - Soil Excavation

Excavation areas shall be pre-wetted as necessary to minimize dust generation. Excavation equipment shall move at speeds consistent with maintaining dust control levels. Excavators shall minimize bucket height over trucks when loading to avoid the unnecessary suspension of soil particulates in the air. Loading shall be done in a slow and controlled manner.

1.2 - Soil Transfer On-site

Soils will be transported from the excavation area to staging areas by dump trucks and front-end loader. The trucks and loaders will keep speeds low to minimize dust generation. Soil stockpiles shall be kept covered except for that portion scheduled to be processed during the day. Water and/or a dust suppression agent, such as magnesium chloride, shall be applied to transfer routes where deemed applicable.

1.3 - Soil Stockpiles

Soil stockpiles will be covered whenever they are not being worked and moisture added as necessary to minimize dust generation.

Traffic routes shall be inspected on a daily basis to monitor soil tracks on asphalt or concrete surfaces. Cleaning of traffic routes shall consist of either washing with a water truck with subsequent collection of sediments, or with the use of a street sweeper that incorporates water jets as part of the sweeping process.

2.0 - Spill Prevention and Mitigation Procedures

The possibility of spillage of contaminated materials exists during loading of transport vehicles and the subsequent transfer of soils to the off-site disposal facility. Equipment operators shall take care in loading trucks to ensure that spillage is minimized and overloading does not occur. Excavator operators shall avoid over loading their bucket and shall place soil in the beds of trucks from a minimal height to avoid spillage. Each truck shall tarp after loading and its tailgate shall be inspected to verify locks are in adequate working condition.

Truck routes on-site shall be inspected periodically during the day to verify that the cleanliness of asphalt and concrete roadways is maintained.

In the event of spillage of material on either on-site or off-site roadways, transporters shall notify Envirocon's Project Manager via a 24-hour response system. The Project Manager shall then dispatch a response vehicle and other additional equipment, i.e., water truck, street sweeper, loader, backhoe, etc., as required. A verbal report of the incident shall be made to the client representative immediately. A written report of the incident will be sent within 24 ours of the incident.

EX. CONC WALK

18.00'

CONC

ASPHALT

CENTERLINE 20' SEWER EASEMENT

N00°23'20"E

EX. SDMH
RIM=85.60
IE EX. 6" CONC(W)=82.60
IE EX. 6" CONC(SW)=82.60
IE EX. 6" CONC(S)=82.60
IE EX. 6" CONC(SE)=82.60
IE EX. 6" CONC(N)=82.60
IE EX. 6" CONC(E)=82.10

10TH STREET

EX. CURB INLET
RIM=85.84
IE EX. 6" CONC(N)=85.04

EX. CURB INLET
RIM=85.20
IE EX. 6" CONC(N)=84.40
IE EX. 6" CONC(S)=84.40

5.0'

EXISTING PROPERTY LINE/ RIGHT-OF-WAY

FUTURE PROPERTY LINE/ RIGHT-OF-WAY TO BE DEDICATED.

479.96'

CONC

NEW DRIVE

N 540

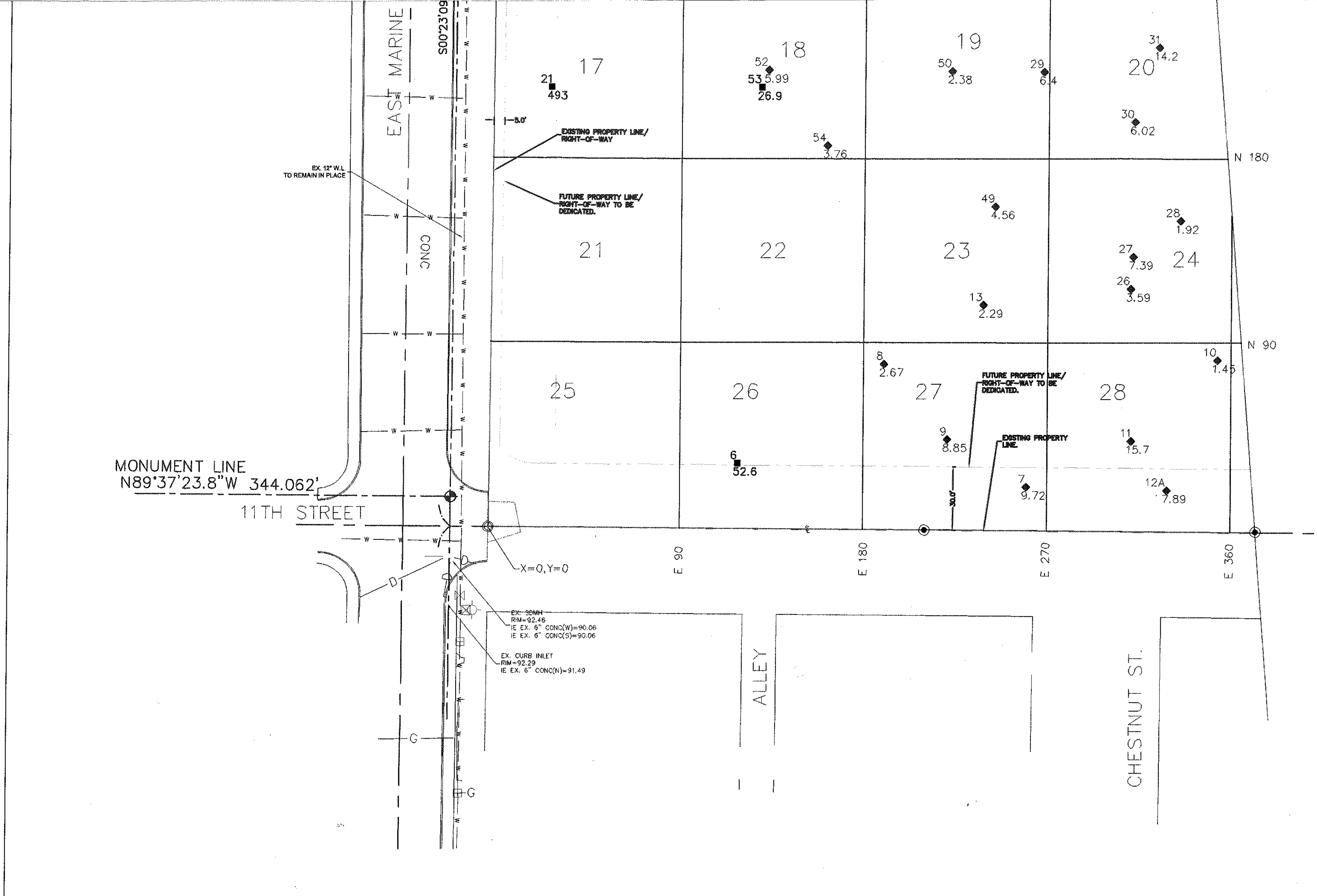
N 450

N 360

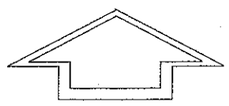
N 270

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

1 7.66
2 55
3 6.97
4 23
5 27.3
14 959
15 74.7
16 36.2
17 33.6
18 323
19 513
20 2680
22 6.68
23 5.93
24 9.69
25 6.42
32A 12.3
33 13.3
34 2.91
35 2.66
36A 49.5
37 5.27
40 5.81
41 16.6
42 11.9
43 5.49
44 3.4
45 2.58
46 35.4
47 7.47
48 5.72
51 32.3
55 2.51
56 3.96
57 8.24
58 2.51
59 4.26
60 10.6
61 32
63 2.55



EAST MARINE
S00°23'09
EX. 12" W.L. TO REMAIN IN PLACE
EXISTING PROPERTY LINE/ RIGHT-OF-WAY
FUTURE PROPERTY LINE/ RIGHT-OF-WAY TO BE DEDICATED.
CONC
17
18
19
20
21
22
23
24
25
26
27
28
N 180
N 90
MONUMENT LINE
N89°37'23.8"W 344.062'
11TH STREET
X=0,Y=0
E 90
E 180
E 270
E 360
FUTURE PROPERTY LINE/ RIGHT-OF-WAY TO BE DEDICATED.
EXISTING PROPERTY LINE.
EX. SDMH
RIM=92.46
IE EX. 6" CONC(W)=90.06
IE EX. 6" CONC(S)=90.06
EX. CURB INLET
RIM=92.29
IE EX. 6" CONC(N)=91.49
ALLEY
CHESTNUT ST.



NORTH

NORTH

1 ◆ 7.66 — Top number is the sample number; The bottom number represents the concentration of arsenic in ppm

1 ◆ 7.66 — Confirmation samples with results under 20 ppm total arsenic

33 ■ 55.2 — Confirmation samples with results 20 ppm or higher total arsenic

40 0 40 80

Scale: 1" = 40'

LOCATION: North Point Apartment Site 1001 East Marine View Drive Everett, Washington	
PREPARED FOR: Stephen Jacobson	PREPARED BY: ENVIROCON 500 TAYLOR STREET MISSOULA, MONTANA 59807
TITLE: Figure 2 Footprint of Phase 1 Excavation and Confirmation Sampling Locations	SCALE: 1" = 40' DRAWING No.: 14313-CONFIRMATION DRAWN BY: JNS CHECKED BY: DJ DATE: 01-02-01 REVISION: 1

TAX LOT 1-012

EX. CONC WALK

18.00'

EX. SSMH
RIM=83.72
IE EX. 8" CONC.(S)=80.52

N00°23'20"E

CENTERLINE 20'
SEWER EASEMENT

EX. SSMH
RIM=38.17
IE EX. 24" CONC.(N)=30.07
IE EX. 24" CONC.(S)=30.07

14.0'

EX. SSMH
RIM=85.91
IE EX. 8" CONC.(N)=79.46
IE EX. 8" CONC.(W)=79.46
IE EX. 8" CONC.(S)=79.46

479.96'

S00°23'09"W

EX. 12" W.L.
TO REMAIN IN PLACE

EX. SSMH
RIM=92.53
EX. 8" CONC.(N)=75.76
EX. 8" CONC.(E)=75.73

MONUMENT LINE
N89°37'23.8"W 344.062'

EX. SSMH
RIM=76.03
IE EX. 8" CONC.(W)=74.28
IE EX. 8" CONC.(S)=74.28
AGAINST RIM TO ELEV. 77.66

LOT 1

NORTH BOUNDARY, PLAT OF EVERETT
DIVISION "O"

LOT 20

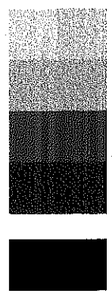
LOT 1

BLK 228

PLAT OF EVERETT DIVISION "O" VOL.6 PG 9

BLK 261

EXCAVATION IN FEET



0.00
−4.00
−6.00
−10.80
−14.00
Below − −14.00

X. SSMH
IM=43.72
EX. 24" CONC.(N)=27.72
EX. 24" CONC.(S)=27.72
" IN (S)=27.87

LANDSCAPE EXCAVATION BOUNDARY

EXCAVATION AT BUILDING FOUNDATION

NORTH

40 0 40 80

Scale: 1" = 40'

LOCATION: North Point Apartment Site 1001 East Marine View Drive Everett, Washington			
PREPARED FOR: Stephen Jacobson	PREPARED BY: ENVIROCON 500 TAYLOR STREET MISSOULA, MONTANA 59807		
TITLE: Figure 3 Excavation Profile Western Slope	SCALE 1" = 40' DRAWING No. 14313-Excav.Profile		REVIS
	DRAWN BY: JNS	CHECKED BY: DJ	DATE: 01-02-01