LUST# 1716
Cowman Campbell Paint
King, Seattle

BETTS
PATTERSON
& MINES, P.S.

800 Financial Center
1215 Fourth Avenue
Seattle, Washington 98161-1090
Fax: 206-343-7053
Phone: 206-292-9988

Ronald D. Allen

July 26, 1996

Mr. Joseph Hickey
Washington Department of Ecology
Northwest Regional Office
Leaking Underground Storage Tank Division
3190 160th Street Southeast
Bellevue, WA 98008

Re: C&C Paint Company Property
~~**5221 Ballard Avenue Northwest**~~ 5232 SHILSHOLE AVE NW 11/8/2011
Seattle, Washington

Dear Mr. Hickey:

Enclosed is a copy of the July 18, 1996 Quarterly Groundwater Monitoring Report for the above-referenced property, including attached laboratory results. We wrote to you with respect to this property on May 17, 1996. As reflected in the enclosed report, the owners of the property are proceeding in accordance with the approach described in our May 17, 1996 correspondence. Should you require any further information, please do not hesitate to contact the undersigned.

Very truly yours,

Ronald D. Allen

RDA:dmp

Enclosure

cc: Mr. Harold Cowman
Mr. Robert Campbell
Columbia Environmental

960930144/072696/1301/21910005

Columbia Environmental Inc.
200 S. 333rd St. • Suite 120 • Federal Way, WA 98003 • Seattle 206/838-7261 Tacoma 206/927-1588 Fax 206/838-5744

July 18, 1996

Hal Cowman
CZS Enterprises Inc.
5221 Ballard Avenue Northwest
Seattle, Washington 98107

RE: Quarterly Groundwater Monitoring
C & C Paint Company Property
5221 Ballard Avenue Northwest
Seattle, Washington
Project Number 95603-2

References: 1) Bison Environmental Northwest, Inc., February 19, 1991: "Site Assessment, C & C Paint Company".

2) Columbia Environmental, Inc., February 12, 1996: "Phase 2 Environmental Site Assessment", same site.

Dear Hal:

Columbia Environmental, Inc., is pleased to provide this Quarterly Groundwater Monitoring report for the C & C Paints property in Seattle, Washington.

As discussed in the referenced reports, soil and groundwater contamination is known to be present in the loading dock area of the site due to the past presence of six underground storage tanks (USTs) in this area. Five of the six tanks had contained mineral spirits, and contamination of soil and groundwater by mineral spirits was discovered during removal of the USTs in 1990. Ten groundwater monitoring wells have been installed on the property and in the adjacent Shilshole Avenue right-of-way to delineate the plume of soil and groundwater contamination. A layer of free product has been observed to be present on the groundwater surface in one of these monitoring wells, designated MW1, since its installation during 1991.

Use of a free product recovery canister was recently initiated in this well. The canister did not function properly in separating the water and product, and liquid removed from the well during this process was a mixture of product and water. However, during attempts to correct this problem, the layer of free product disappeared.

SCOPE OF WORK

The scope of work for this project included:

- The collection and laboratory analysis of groundwater samples from six of the monitoring wells.
- Preparation of this report.

METHODOLOGY

The wells were sampled on June 20, 1996, by an environmental engineer from our firm. Groundwater sampling was conducted in accordance with WDOE and EPA guidelines as described below.

Prior to sampling, each well was checked for the presence of free product using a disposable bailer. The depth to groundwater was then measured relative to the north edge of the well casing using an electronic water level indicator. Measurements were accurate to the nearest 0.01 foot. The well was then purged by removing a minimum of 3 volumes of water, after which a sample was collected. A submersible pump was used to purge most of the wells, which were then sampled using a PVC bailer. Wells in which high levels of contamination was suspected were purged and sampled using disposable teflon bailers.

Groundwater samples were transferred to sterilized, preserved glassware which had been provided by the project laboratory. A label indicating the sample number, project number, sampler, and date and time of sampling, was affixed to each sample, and the sample was recorded on a chain-of-custody form. Samples were stored in an iced chest on site and during transport to the laboratory.

To avoid cross-contamination, all non-disposable sampling and measurement equipment was cleaned and rinsed with laboratory-grade detergent and distilled water before and after each use. In addition, the wells were sampled in the order of increasing probability of contamination as judged based on past laboratory results.

Water produced by purging the wells and decontaminating equipment was sealed in clearly labelled 55-gallon drums which remained on the site.

Laboratory Analysis

Samples were taken to OnSite Environmental of Redmond, Washington for analysis. Mineral spirits are in the gasoline petroleum hydrocarbon range. Based on Washington Department of Ecology guidance documents, the mineral spirits were quantified as gasoline using the WTPH-G analysis. The sample from MW1 was also analyzed for the gasoline/mineral spirits constituents benzene, toluene, ethylbenzene, and xylenes (BTEX).

RESULTS

No free product was observed in any of the six wells sampled on June 20, 1996. A faint sheen and hydrocarbon odors were noted during sampling of MW1, and hydrocarbon odors were noted during sampling of MW7. Due to the silty nature of the surrounding soil, groundwater recharge within the wells was relatively slow. Each well was allowed 1/2 to 1 hour of recovery time between purging and sampling. The wells were capped during the recovery period to minimize contaminant volatilization from groundwater within the wells.

Depth-to-groundwater measurements and groundwater elevations obtained during our previous survey and the current sampling event are summarized in the following table (all measurements are in feet):

Monitoring Well	Monitoring Well Elevation	Date	Depth to Groundwater	Groundwater Elevation
MW1	19.72	01/30/96	4.60	15.11
MW2	19.74	01/30/96	4.54	15.20
		06/20/96	4.63	15.11
MW3	19.80	01/30/96	4.71	15.09
MW4	20.00	01/30/96	5.17	14.83
MW5	19.57	01/30/96	5.19	14.38
MW6	20.39	01/30/96	4.57	15.82
MW7	20.65	01/30/96	2.97	17.68
		06/20/96	2.08	18.57
MW8	21.29	01/30/96	3.90	17.39
		06/20/96	3.94	17.35
MW9	23.98	01/30/96	4.32	19.66
		06/20/96	4.47	19.51
MW10	19.89	01/30/96	6.06	13.83
		06/20/96	5.78	14.11

As indicated by the above table, changes in groundwater elevations from the previous survey range from an elevation increase of nearly 1 foot in MW7 to a decrease in elevation of 0.14 feet in MW9. While these changes are somewhat unusual, the groundwater gradient on the site appears to be similar to the previous gradient, sloping downward to the west-southwest.

Laboratory Results

The results of laboratory analysis of samples collected during this study are included in Appendix B of this report. Table A in Appendix B summarizes the results of groundwater analysis from the current and previous sampling events.

As indicated in Table A, concentrations of mineral spirits in excess of the regulatory cleanup level of 1.0 parts per million (ppm) were detected in MW1, MW2, MW7, and MW10 during this sampling event. The reported mineral spirits concentration of 210 ppm in MW1 is significantly lower than the previous concentration of 24,000 ppm reported during sampling in November of 1995. Reported mineral spirits concentrations in MW2 and MW10 slightly exceeded the cleanup level. Mineral spirits concentrations reported by previous analysis of samples from these wells were slightly below the cleanup level in MW10, and below analytical detection limits in MW2.

CONCLUSIONS

The following conclusions are offered based on information obtained during this sampling event and previous work on the site:

The free product layer which has been present on the groundwater surface in MW1 was not observed during this sampling event. In addition, concentrations of mineral spirits in groundwater within this well appear to have reduced considerably since the previous sampling event. This well is located generally down-gradient of the former UST excavation, and is separated from this excavation by the lab building. The apparent source of the free product at this location would be mineral spirits from the USTs and piping which had migrated beneath the lab building. The USTs have been removed, and it is possible that the free product which was underneath the building has been depleted due to dilution and degradation, and due to removal of groundwater from the wells during purging and sampling. There is also some possibility that the free product is a seasonal phenomenon. Continuation of quarterly monitoring will provide additional information on this matter.

Reported mineral spirits concentrations in groundwater from MW2 and MW10 during this round of sampling slightly exceeded the 1.0 ppm regulatory cleanup level. Mineral spirits concentrations reported by previous analysis of samples from these wells were slightly below the cleanup level in MW10, and below analytical detection limits in MW2. There is some potential for contaminant migration based on these results, however, we recommend that this potential be evaluated after the next round of sampling, tentatively scheduled for September of 1996.

We recommend that a copy of this report be provided to the Washington Department of Ecology's Northwest Regional Office for their records.

LIMITATIONS

This report has been prepared for the exclusive use of the client and their representatives for specific application to the C & C Paints Property in Seattle, Washington. The scope of work for this project was limited to known contamination in the vicinity of the shipping yard. Other areas of contamination may be present which were not addressed by this report. The work for this project was conducted in a manner consistent with generally accepted environmental science practices for consultants acting under similar conditions in the area, and in accordance with the terms of the client's request. No other warranty is expressed or implied.

If new information on the site is developed during future environmental studies, Columbia Environmental, Inc., should be allowed to review this information, to reevaluate the conclusions of this report, and to provide amendments as required.

* * *

We appreciate the opportunity to provide environmental consulting services on this project. Should you have any questions or if there is additional information that you require, please do not hesitate to contact us.

Sincerely,

Columbia Environmental, Inc.

Henry Perrin
Environmental Engineer
WDOE-registered UST Site Assessor

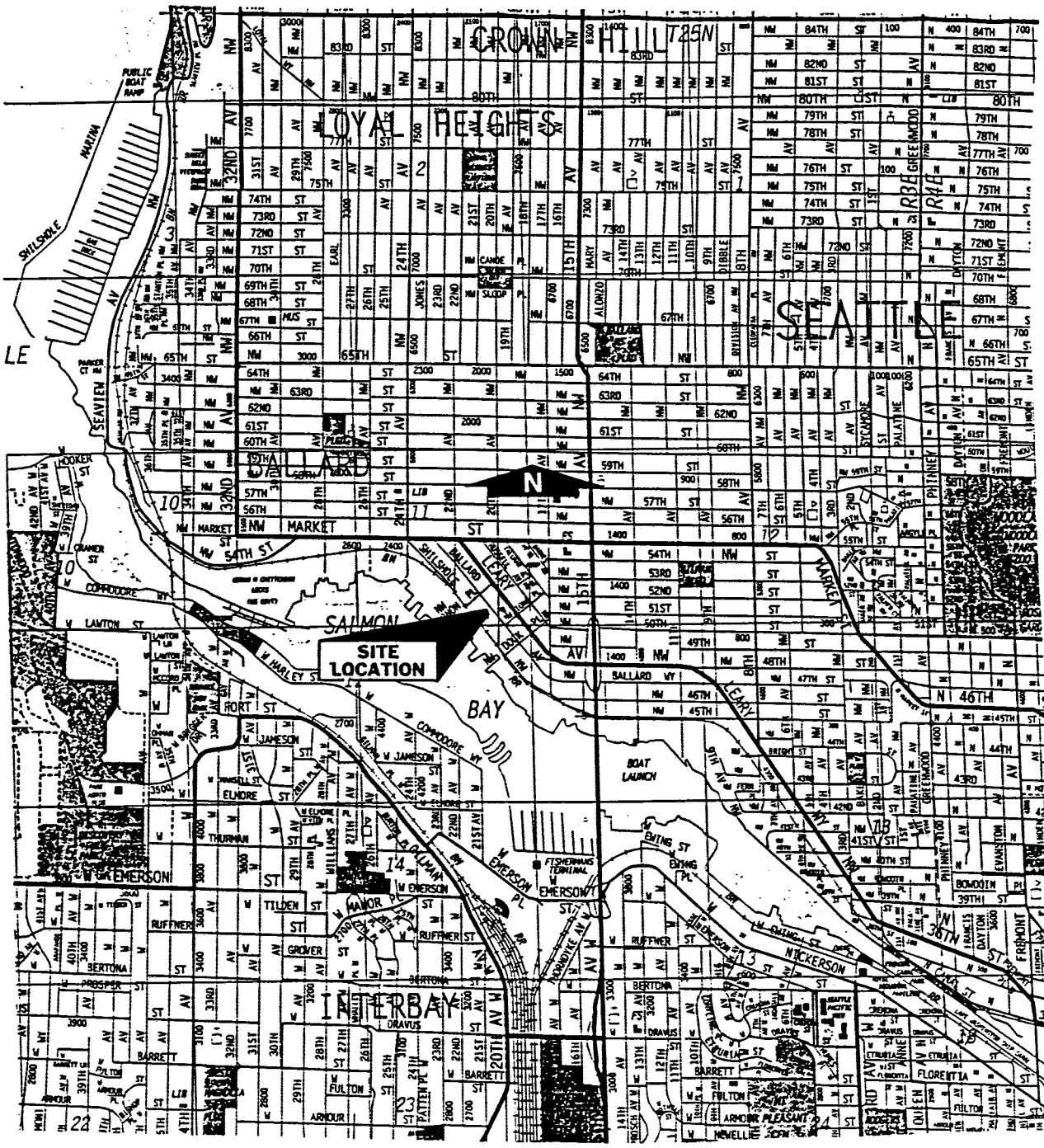
William R. Shuck
President

Attachments:
Appendix A: Site Location Map & Site (3)
Appendix B: Laboratory Results (9)

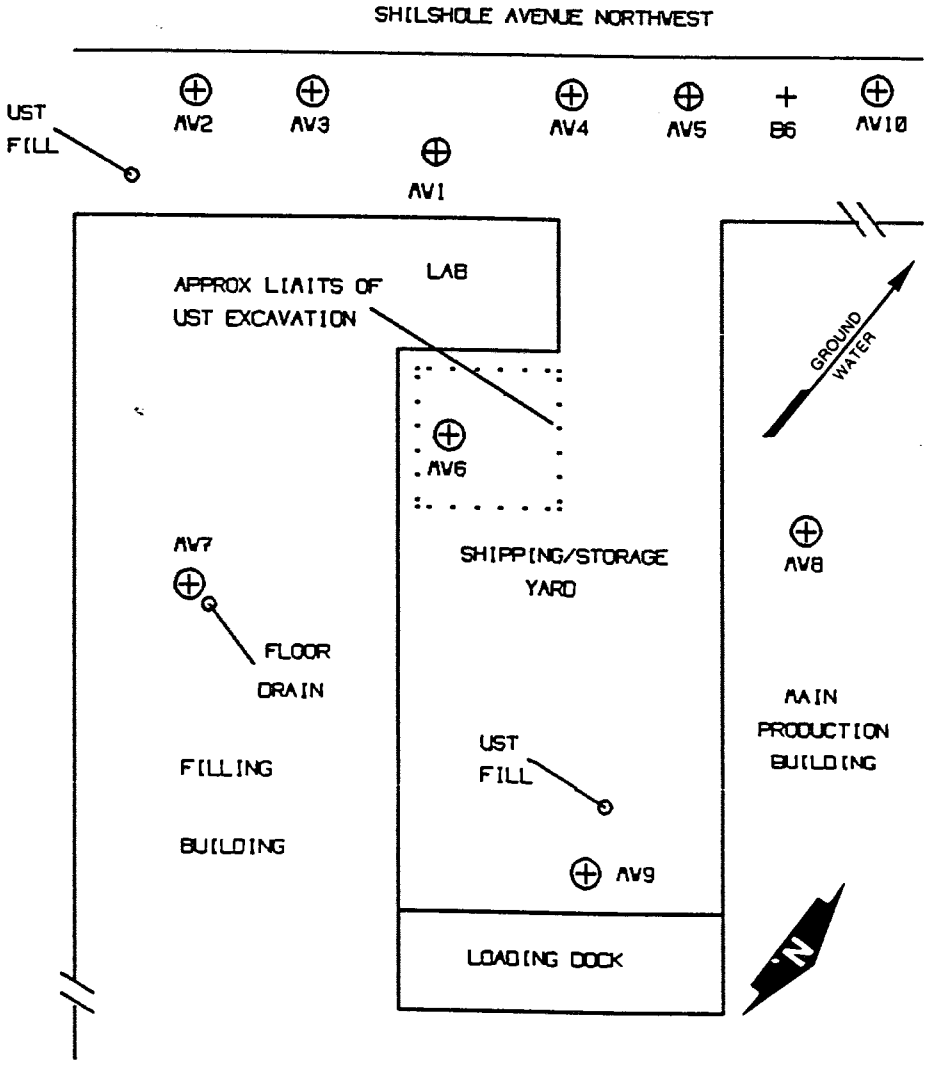
cc: Ronald Allen, Betts Patterson & Mines

Appendix A

Site Location Map & Site Plans



SITE LOCATION C&C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-2 July 1996



SCALE

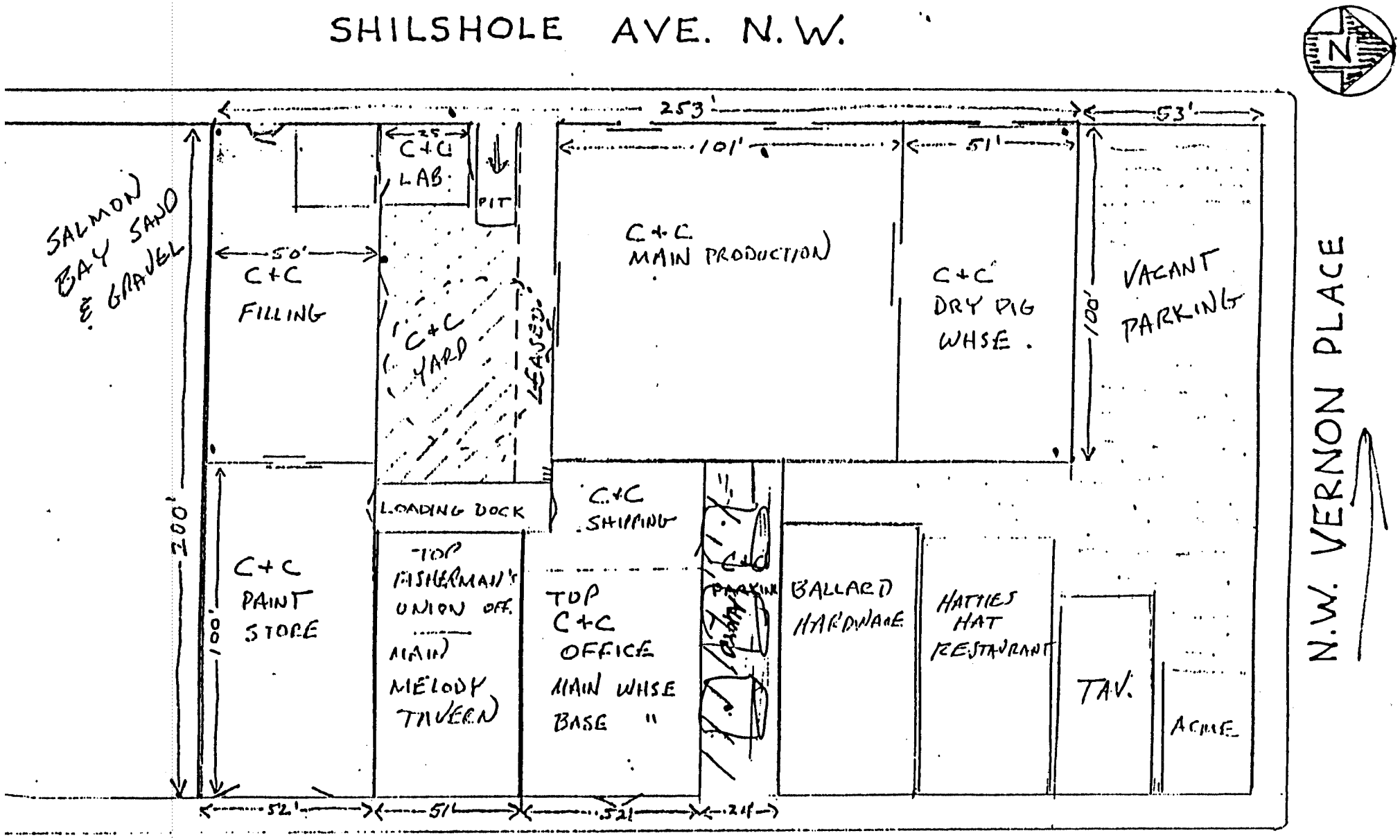
0 30'

KEY

AV2 MONITORING WELL

B6 TEST BORING

SITE PLAN **C&C Paints** **Seattle, Washington**	**Columbia Environmental, Inc.** **Project Number 95603-2** **July 1996**



SCALE: 1/10" = 4'

HAC 10-13-92

Appendix B

Laboratory Results

TABLE A:

Summary of Analytical Results
Project No. 95603-2

Monitoring Well	Date	Mineral Spirits (ppm)*	B (ppm)	T (ppm)	E (ppm)	X (ppm)
MW1	11/27/95	24,000	0.93	41	550	855
	06/20/96	210	.0085	0.30	14	226
MW2	11/27/95	ND	ND	ND	.0066	0.027
	06/20/96	1.1	-	-	-	-
MW3	11/27/95	ND	ND	ND	ND	ND
MW4	11/27/95	78	0.004	0.04	4.6	20.8
MW5	11/27/95	28	0.004	0.011	1.5	7.4
MW6	01/29/96	0.68	.0035	ND	.0022	0.112
MW7	01/29/96	61	0.002	0.34	3.5	3.2
	06/20/96	16	-	-	-	-
MW8	01/29/96	ND	ND	ND	ND	0.001
	06/20/96	ND	-	-	-	-
MW9	01/29/96	ND	ND	ND	ND	ND
	06/20/96	ND	-	-	-	-
MW10	01/29/96	0.93	ND	ND	0.062	0.397
	06/20/96	1.1	-	-	-	-
Groundwater Cleanup Level		1.0	0.005	0.04	0.03	0.02

NOTES TO TABLE A

1) * Quantified as gasoline using the WTPH-G analysis.
2) ppm denotes parts per million.
3) Cleanup levels are "Method A" Cleanup Levels as specified in the Model Toxics Control Act, Chapter 173-340 WAC.
4) ND denotes none detected.
5) B, T, E, and X denote benzene, toluene, ethylbenzene and xylenes.
6) - indicates sample not analyzed for parameter.

OnSite
Environmental Inc.
Analytical Testing and Mobile Laboratory Services

June 26, 1996

Henry Perrin
Columbia Environmental Inc.
200 South 333rd Street, Suite 120
Federal Way, WA 98003

Re: Analytical Data for Project 95603-2
Laboratory Reference No. 9606-109

Dear Henry:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on June 21, 1996.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

Date of Report: June 26, 1996
Samples Submitted: June 21, 1996
Lab Traveler: 06-109
Project: 95603-2

WTPH-G

Date Extracted: 6-21&22-96
Date Analyzed: 6-21&22-96

Matrix: Water
Units: ug/L (ppb)

Client ID	Lab ID	Dilution Factor	TPH-Gas	Surrogate Recovery*	Flags	PQL
MW7	06-109-1	50	**16000**	91%		5000
MW8	06-109-2	1.0	**ND**	92%		100
MW9	06-109-3	1.0	**ND**	85%		100
MW2	06-109-4	1.0	**1100**	89%		100
MW10	06-109-5	1.0	**1100**	91%		100

* 4-Bromoflurobenzene

Date of Report: June 26, 1996
Samples Submitted: June 21, 1996
Lab Traveler: 06-109
Project: 95603-2

EPA 602 & WTPH-G

Date Extracted:	6-21&22-96
Date Analyzed:	6-21&22-96
Matrix: Water	
Units: ug/L (ppb)	
Lab ID:	06-109-6
Client ID:	**MW1**
Dilution Factor	50

	Result	Flags	PQL
Benzene	**8.5**	D	5.0
Toluene	**300**		50
Ethyl Benzene	**14000**	D1	1000
m,p-Xylene	**56000**	D1	1000
o-Xylene	**16000**	D1	1000
TPH-Gas	**210000**		5000
4-BFB Surrogate Recovery	91%		

D-Data from 1:5 dilution.
D1-Data from 1:1000 dilution.

Date of Report: June 26, 1996
Samples Submitted: June 21, 1996
Lab Traveler: 06-109
Project: 95603-2

EPA 602 & WTPH-G
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-21-96
Date Analyzed:	6-21-96
Matrix: Water	
Units: ug/L (ppb)	
Lab ID:	MB0621W1
Dilution Factor	1

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100
4-BFB Surrogate Recovery	84%		

Date of Report: June 26, 1996
Samples Submitted: June 21, 1996
Lab Traveler: 06-109
Project: 95603-2

EPA 602 & WTPH-G
DUPLICATE QUALITY CONTROL

Date Extracted: 6-14-96
Date Analyzed: 6-14-96

Matrix: Water
Units: ug/L (ppb)

Lab ID:	06-065-1	06-065-1	
	Original	**Duplicate**	**RPD**
Dilution Factor	1	1	
Benzene	**4.00**	**3.92**	2.0
Toluene	**ND**	**ND**	NA
Ethyl Benzene	**ND**	**ND**	NA
m,p-Xylene	**ND**	**ND**	NA
o-Xylene	**ND**	**ND**	NA
TPH-Gas	**ND**	**ND**	NA
4-BFB Surrogate Recovery	96%	95%	

Date of Report: June 26, 1996
Samples Submitted: June 21, 1996
Lab Traveler: 06-109
Project: 95603-2

EPA 602 & WTPH-G
MS/MSD QUALITY CONTROL

Date Extracted: 6-14-96
Date Analyzed: 6-14-96

Matrix: Water
Units: ug/L (ppb)

Lab ID spiked @ 50 ppb Dilution Factor	06-065-1 **MS** 1	Percent Recovery	06-065-1 **MSD** 1	Percent Recovery	RPD
Benzene	**53.3**	**99%**	**56.3**	**105%**	5.9
Toluene	**49.5**	**99%**	**52.5**	**105%**	5.9
Ethyl Benzene	**49.2**	**98%**	**52.5**	**105%**	6.5
m,p-Xylene	**49.4**	**99%**	**52.6**	**105%**	6.3
o-Xylene	**49.0**	**98%**	**52.9**	**106%**	7.7
4-BFB Surrogate Recovery	99%		103%		

06-109

Columbia Environmental Inc.

200 S. 333rd St. • Suite 120 • Federal Way, WA 98003

Seattle 206/838-7281 Tacoma 206/927-1588 Fax 206/838-5744

DAB

CHAIN OF CUSTODY RECORD

Page 1 of 1

Project# 95603-2

Project Name

Client

Results to Henry Perish

Sample #	Location	Sample Description	Date	Time	Sample Type	Analysis Required
MW7		2x015	6/20	110	GW	WTPH-G
MW8		↓	↓	210	↓	↓
MW9				510		
MW2				350		
MW10				410		↓
MW1		↓	↓	420	↓	WTPH-G/BTEX
			↓			

Sample Type: A=Air B=Bulk S=Soil W-Water Other-Describe

Special Instructions

SIGNATURES: (Name, Company, Date and Time) Laboratory Name: O.S.H

1. Relinquished by: 6/21/96 815 2. Relinquished by:

Received by: Susan Hampton 6/21/96 8:15 Received by:

Delivered by: Hand ____ UPS ____ Airborne ____ Fed X ____ Other Pick-p