LUST #1710
COWMAN CAMPBELL PAIN
KING CO. / SEATTLE

Law Offices

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

January 21, 1997

DEPARTMENT OF ECOLOGY
NWRO/TCP TANKS UNIT
INTERIM CLEANUP REPORT ☐
SITE CHARACTERIZATON ☐
FINAL CLEANUP REPORT ☑
OTHER _____
AFFECTED MEDIA: SOIL ☑
OTHER _____ GW ☑
INSPECTOR (INIT.) RA DATE 3-4-97

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~~
Seattle, Washington 5232 SHILSHOLE AVE NW
11-7-2011

ENTERED
3-4-97

Dear Mr. Hickey:

In accordance with the plan first described in our May 17, 1996 correspondence, we enclose a copy of the most recent Quarterly Groundwater Monitoring Report for the above-referenced property, prepared by Columbia Environmental, Inc. The report is dated January 13, 1997, and contains well testing data on samples collected December 10, 1996. Copies of laboratory results are also attached. 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 further information, please contact the undersigned.

Very truly yours,

Ronald D. Allen

RDA:dmp

Enclosure

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

RECEIVED
JAN 22 1997
DEPT. OF ECOLOGY

960930144/012197/1003/21910005

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

January 13, 1997

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 was observed to be present on the groundwater surface in one of these monitoring wells, designated MW1, following its installation during 1991.

Use of a free product recovery canister was initiated in MW1 during the early months of 1996. 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, and has not been observed to be present since the spring of 1996.

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 December 10, 1996, by an environmental technician 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. The wells were purged and sampled using disposable PTE 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. Selected samples were also analyzed for the gasoline/mineral spirits constituents benzene, toluene, ethylbenzene, and xylenes (BTEX) based on the past presence of these contaminants.

RESULTS

No free product was observed in any of the six wells sampled on December 10, 1996. A sheen and hydrocarbon odors were noted during sampling of MW1. Due to the silty nature of the surrounding soil, groundwater recharge within the wells was relatively slow. Each well was allowed at least 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):

TABLE A: GROUNDWATER SURVEY RESULTS

Monitoring Well	Monitoring Well Elevation	Date	Depth to Groundwater	Groundwater Elevation
MW1	19.72	01/30/96	4.60	15.11
		09/11/96	5.04	14.68
		12/10/96	4.84	14.88
MW2	19.74	01/30/96	4.54	15.20
		06/20/96	4.63	15.11
		09/11/96	5.34	14.40
		12/10/96	3.14	16.60
MW3	19.80	01/30/96	4.71	15.09
		09/11/96	5.27	14.53
MW4	20.00	01/30/96	5.17	14.83
		09/11/96	5.72	14.28
MW5	19.57	01/30/96	5.19	14.38
		09/11/96	5.73	13.84
MW6	20.39	01/30/96	4.57	15.82
		09/11/96	3.48	16.91
MW7	20.65	01/30/96	2.97	17.68
		06/20/96	2.08	18.57
		09/11/96	3.11	17.54
		12/10/96	2.98	17.67
MW8	21.29	01/30/96	3.90	17.39
		06/20/96	3.94	17.35
		09/11/96	4.14	17.15
		12/10/96	3.97	17.32

TABLE A (continued): GROUNDWATER SURVEY RESULTS

Monitoring Well	Monitoring Well Elevation	Date	Depth to Groundwater	Groundwater Elevation
MW9	23.98	01/30/96	4.32	19.66
		06/20/96	4.47	19.51
		09/11/96	4.65	19.33
		12/10/96	4.31	19.67
MW10	19.89	01/30/96	6.06	13.83
		06/20/96	5.78	14.11
		09/11/96	6.43	13.46
		12/10/96	5.64	14.25

As indicated by the above table, the groundwater elevations within the sampled wells have increased slightly since the previous sampling event in September of 1996. The magnitude of the increased elevation ranged from 0.17 feet in MW8 to 0.79 feet in MW10 (the change of 2.2 feet in MW2 is considered unlikely, and is attributed to a measurement error). The changes indicate that the water table is beginning to rise from recharge cause by seasonal rainfall. The groundwater gradient on the site appears to be similar to the previous gradients, 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 B in Appendix B summarizes the results of groundwater analysis from the current and previous sampling events.

As indicated in Table B, concentrations of mineral spirits in excess of the regulatory cleanup level of 1:0 parts per million (ppm) were detected in MW1 and MW7 during this sampling event. The reported mineral spirits concentrations of 190 and 15 ppm in MW1 and MW7, respectively, are within the same general range of concentrations reported during previous 1996 sampling events. Some BTEX constituents in MW7, and all BTEX constituents in MW1, exceeded regulatory cleanup levels for these contaminants.

With the exception of trace BTEX constituents which were well below regulatory cleanup levels, no mineral spirits or BTEX concentrations were reported in MW2 or MW10. As in previous sampling events, no mineral spirits were detected in MW8 or MW9.

CONCLUSIONS

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

Concentrations of mineral spirits in excess of the regulatory cleanup level of 1.0 parts per million (ppm) were detected in MW1 and MW7 during this sampling event. These wells have historically contained elevated mineral spirits concentrations, and a free product layer has been present in MW1.

As in the previous June and September sampling events, the free product layer which had been present on the groundwater surface in MW1 was not observed during this sampling event. Concentrations of mineral spirits in groundwater within both MW1 and MW7 show some fluctuation over the time period from June to September, but generally appear to be stable based on the limited data available.

With the exception of trace concentrations of some BTEX constituents in MW2 and MW10, no mineral spirits or BTEX constituents were detected in groundwater samples from the other four wells. This is generally consistent with previous results, which suggest that MW2 and MW10 are located near the boundary of the contaminant plume, and that MW8 and MW9 are outside of the contaminated area.

A final round of quarterly monitoring, tentatively scheduled for March of 1997, is recommended for this site. After this time, it is recommended that at a minimum, the wells be sampled on an annual basis, with sampling occurring during February or March.

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 is limited to known contamination in the vicinity of the shipping yard. Other areas of contamination may be present which are 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
Washington State Registered UST Site Assessor

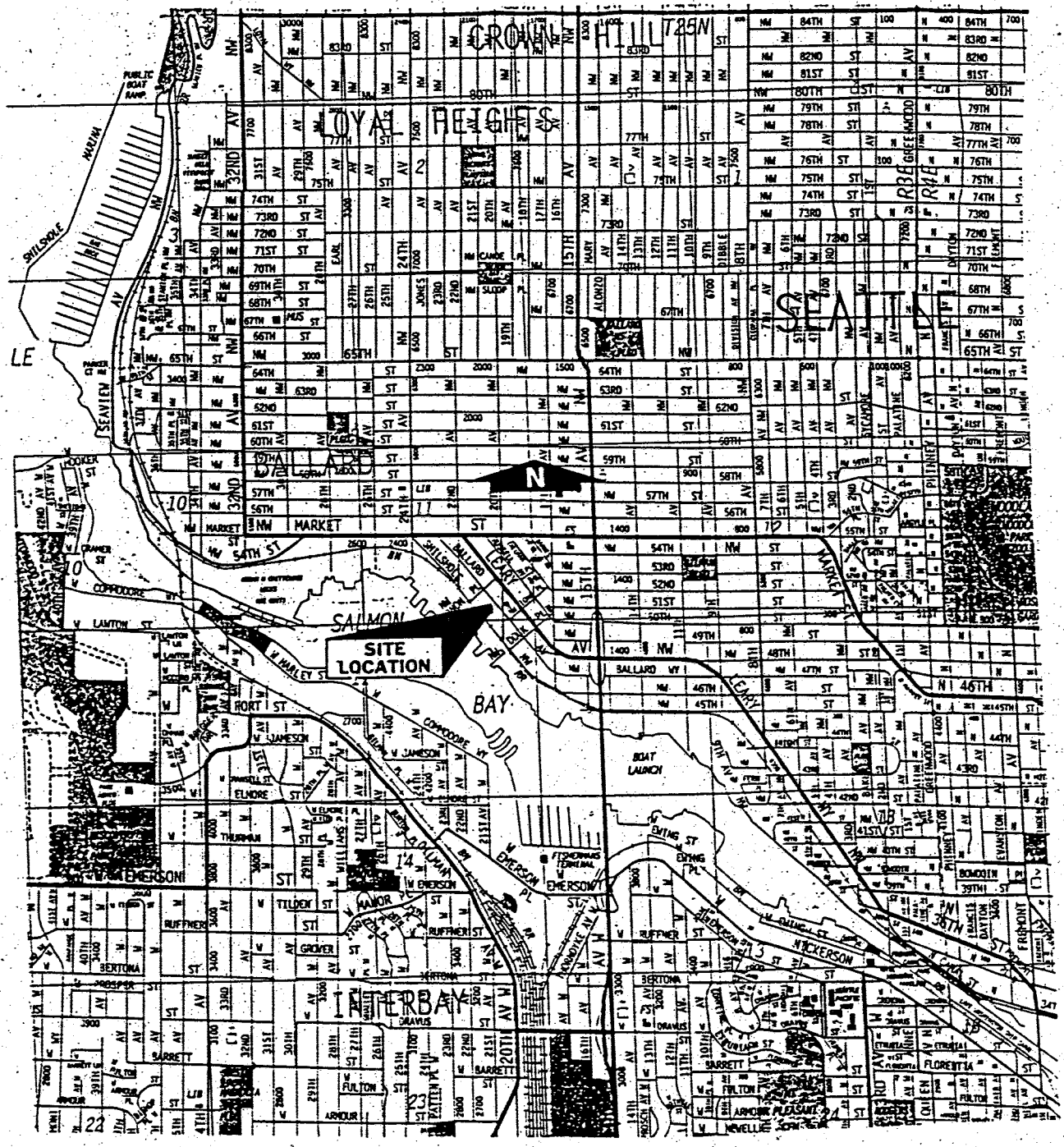
Tim Stott
Project Manager

Attachments:
Appendix A: Site Location Map & Site Plans (3)
Appendix B: Laboratory Results (12)

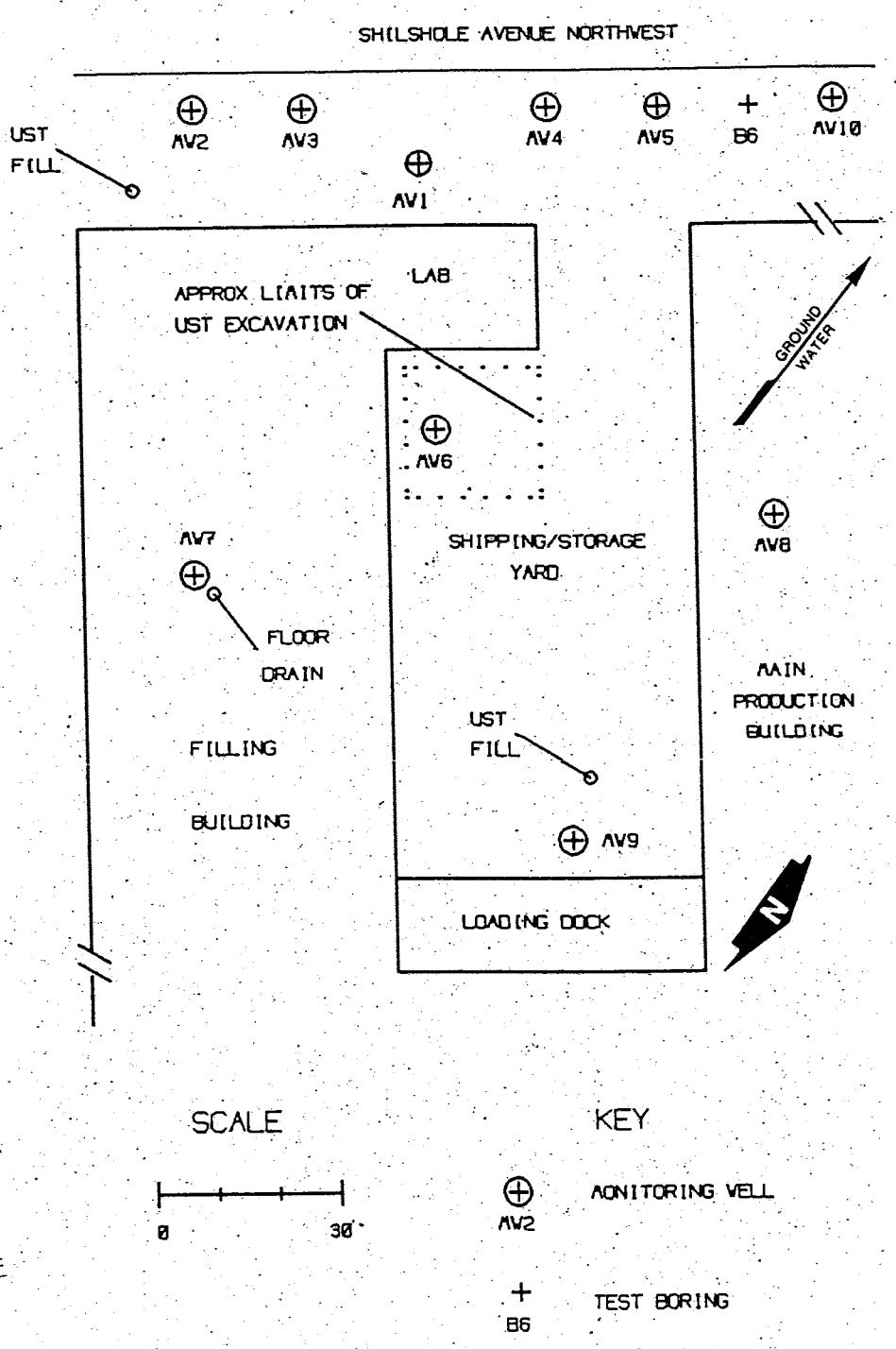
cc: Ronald Allen, Betts Patterson & Mines

Appendix A

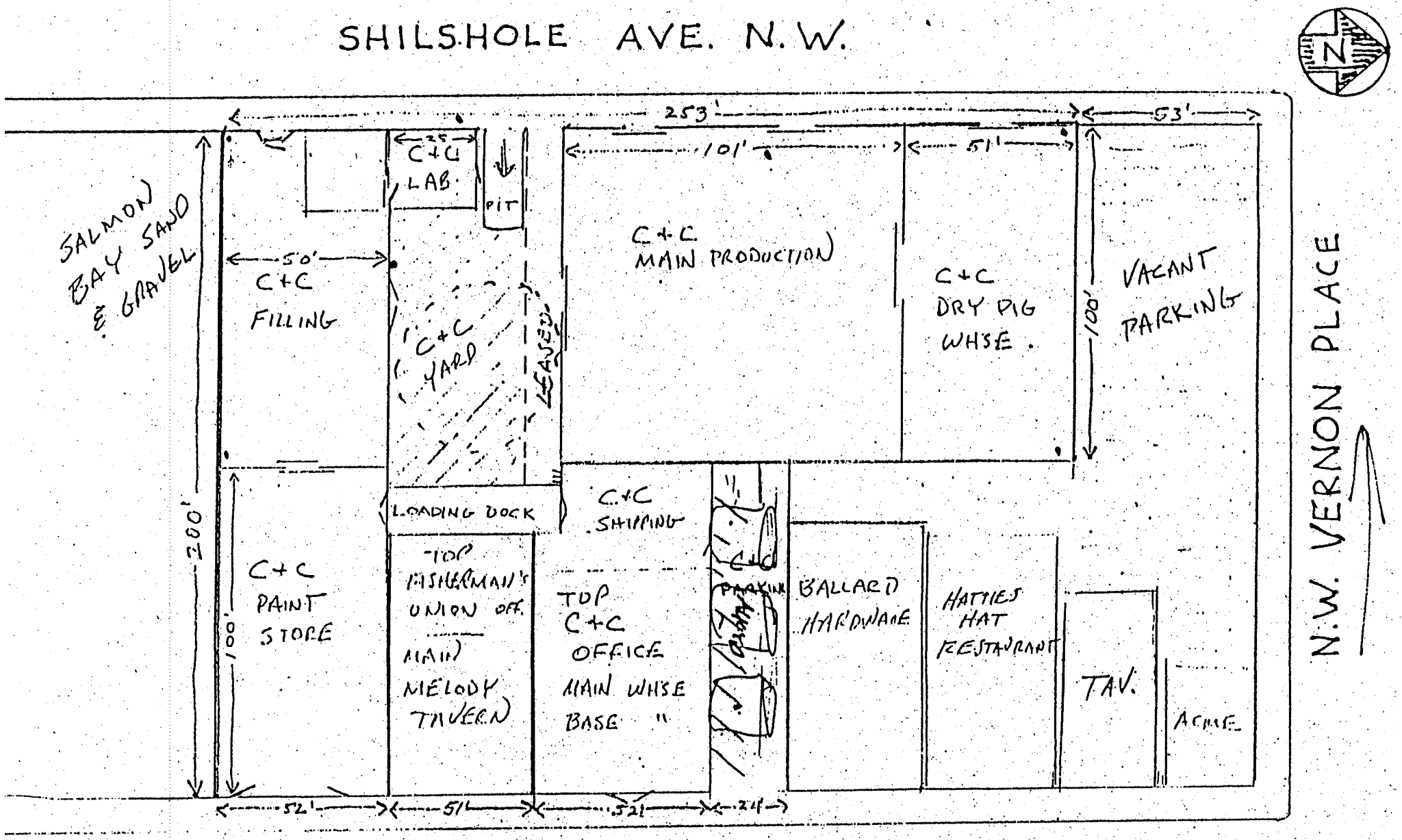
Site Location Map & Site Plans



SITE LOCATION C&C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-2 January 1997



SITE PLAN C&C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-2 January 1997



SCALE: 1/10" = 4'

HAC 10-13-92

Appendix B

Laboratory Results

TABLE B:
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
	09/11/96	190	ND	ND	13	58
	12/10/96	190	0.007	0.27	14	64
MW2	11/27/95	ND	ND	ND	.0066	0.027
	06/20/96	1.1	-	-	-	-
	09/11/96	0.90	ND	0.023	0.079	0.379
	12/10/96	ND	ND	ND	0.0011	0.0023
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	-	-	-	-
	09/11/96	9.0	ND	0.003	0.87	0.203
	12/10/96	15	ND	0.0068	1.3	3.63
MW8	01/29/96	ND	ND	ND	ND	0.001
	06/20/96	ND	-	-	-	-
	09/11/96	ND	ND	ND	ND	ND
	12/10/96	ND	-	-	-	-
MW9	01/29/96	ND	ND	ND	ND	ND
	06/20/96	ND	-	-	-	-
	09/11/96	ND	ND	ND	ND	ND
	12/10/96	ND	-	-	-	-
MW10	01/29/96	0.93	ND	ND	0.062	0.397
	06/20/96	1.1	-	-	-	-
	09/11/96	0.58	ND	ND	0.043	0.171
	12/10/96	ND	ND	ND	ND	0.0012
Groundwater Cleanup Level		1.0	0.005	0.04	0.03	0.02

NOTES TO TABLE B

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. Refer to laboratory report for detection limit.
5) B, T, E, and X denote benzene, toluene, ethylbenzene and xylenes.
6) - indicates sample not analyzed for parameter.

DEC 2 3 1996

OnSite
Environmental Inc.
Analytical Testing and Mobile Laboratory Services

December 19, 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. 9612-042

Dear Henry:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on Decmeber 12, 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,

Karl P. Hornyik
Project Chemist

Enclosures

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

EPA 8020 & WTPH-G

Date Extracted: 12-12-96
Date Analyzed: 12-12&13-96

Matrix: Water
Units: ug/L (ppb)

Lab ID:	12-042-3			12-042-4		
Client ID:	**MW10**			**MW2**		
Dilution Factor	1			1		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		1.0	**ND**		1.0
Toluene	**ND**		1.0	**ND**		1.0
Ethyl Benzene	**ND**		1.0	**1.1**		1.0
m,p-Xylene	**1.2**		1.0	**2.3**		1.0
o-Xylene	**ND**		1.0	**ND**		1.0
TPH-Gas	**ND**		100	**ND**		100
FLUOROBENZENE Surrogate Recovery	88%			86%		

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

EPA 8020 & WTPH-G

Date Extracted: 12-12-96
Date Analyzed: 12-12,13&17-96

Matrix: Water
Units: ug/L (ppb)

Lab ID:	12-042-5			12-042-6		
Client ID:	**MW7**			**MW1**		
Dilution Factor	100			500		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**	D	5.0	**7.0**	D	5.0
Toluene	**6.8**	D	5.0	**270**	D	5.0
Ethyl Benzene	**1300**		100	**14000**		500
m,p-Xylene	**3300**		100	**49000**		500
o-Xylene	**330**		100	**15000**		500
TPH-Gas	**15000**		10000	**190000**		50000
FLUOROBENZENE Surrogate Recovery	89%			91%		

D-Data from 1:5 dilution.

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

EPA 8020 & WTPH-G
METHOD BLANK QUALITY CONTROL

Date Extracted: 12-12-96
Date Analyzed: 12-12-96

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1212W1

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

FLUOROBENZENE
Surrogate Recovery 88%

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

EPA 8020 & WTPH-G
DUPLICATE QUALITY CONTROL

Date Extracted: 12-10-96
Date Analyzed: 12-10-96

Matrix: Water
Units: ug/L (ppb)

Lab ID:	12-025-50,51 Original	12-025-50,51 Duplicate	RPD
Dilution Factor	1	1	
Benzene	ND	ND	NA
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
FLUOROBENZENE Surrogate Recovery	89%	90%	

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

EPA 8020 & WTPH-G
MS/MSD QUALITY CONTROL

Date Extracted: 12-10-96
Date Analyzed: 12-10-96

Matrix: Water
Units: ug/L (ppb)

Lab ID	12-025-50,51		12-025-50,51		
spiked @ 50 ppb	**MS**	Percent	**MSD**	Percent	
Dilution Factor	1	Recovery	1	Recovery	RPD
Benzene	**47.7**	**95%**	**50.8**	**102%**	6.3
Toluene	**48.2**	**96%**	**50.7**	**101%**	5.1
Ethyl Benzene	**47.9**	**96%**	**50.1**	**100%**	4.5
m,p-Xylene	**47.9**	**96%**	**50.1**	**100%**	4.5
o-Xylene	**47.9**	**96%**	**50.0**	**100%**	4.3
FLUOROBENZENE					
Surrogate Recovery	86%		96%		

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

WTPH-G

Date Extracted: 12-12-96
Date Analyzed: 12-12-96

Matrix: Water
Units: ug/L (ppb)

Client ID	Lab ID	Dilution Factor	TPH-Gas	Surrogate Recovery*	Flags	PQL
MW9	12-042-1	1.0	**ND**	82%		100
MW8	12-042-2	1.0	**ND**	87%		100

* Flurobenzene

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

WTPH-G
METHOD BLANK QUALITY CONTROL

Date Extracted: 12-12-96
Date Analyzed: 12-12-96

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1212W1

	Dilution Factor	TPH-Gas	Surrogate Recovery*	Flags	PQL
Method Blank	1.0	ND	88%		100

* Flurobenzene

Date of Report: December 19, 1996
Samples Submitted: Decmeber 12, 1996
Lab Traveler: 12-042
Project: 95603-2

WTPH-G
DUPLICATE QUALITY CONTROL

Date Extracted: 12-12-96
Date Analyzed: 12-12-96

Matrix: Water
Units: ug/L (ppb)

Lab ID: 12-025-50,51

	Dilution Factor	TPH-Gas	Surrogate Recovery*	Flags	PQL
Sample	1.0	ND	89%		100
Duplicate	1.0	ND	90%		100
RPD		NA			

* Flurobenzene

12-042

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

KPH

CHAIN OF CUSTODY RECORD

Page 1 of 1

Project# 95603-2

Project Name C+C Paints

Client Columbia Environmental

Results to Henry Perrin

Sample #	Location	Sample Description	Date	Time	Sample Type	Analysis Required
MW9	5221 Ballard Ave NW	Ground Water	12/10/96	12:30	2/40 ML VOAS	WTPH-G
MW8				12:40	W	"
MW10				12:48		G/BTEX
MW2				12:57		G/BTEX
MW7				13:10		G/BTEX
MW1				13:20		G/BTEX

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

Special Instructions Standard TAT

SIGNATURES: (Name, Company, Date and Time) Laboratory Name: On Site

1. Relinquished by: John P. Gilpin 12/10/96

Received by: Isabelle Bilton 12/10/96 4pm

2. Relinquished by: [signature] 12/12/96 8:15

Received by: Jessie Hanson 12/12/96 8:15

Delivered by: Hand 1 UPS _____ Airborne _____ Fed X _____ Other Pick up

OnSite
Environmental Inc.
Analytical Testing and Mobile Laboratory Services

September 19, 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. 9609-027

Dear Henry:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on September 12, 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,

Karl P. Hornyik
Project Chemist

Enclosures

14904 NE 31st Circle, Redmond, WA 98052, (206) 883-3881, Fax (206) 885-4603

Date of Report: September 19, 1996
Samples Submitted: September 12, 1996
Lab Traveler: 09-027
Project: 95603-2

EPA 602 & WTPH-G

Date Extracted:	9-12-96					
Date Analyzed:	9-12-96					
Matrix: Water						
Units: ug/L (ppb)						
Lab ID:	09-027-1			09-027-2		
Client ID:	**MW9**			**MW8**		
Dilution Factor	1			1		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		1.0	**ND**		1.0
Toluene	**ND**		1.0	**ND**		1.0
Ethyl Benzene	**ND**		1.0	**ND**		1.0
m,p-Xylene	**ND**		1.0	**ND**		1.0
o-Xylene	**ND**		1.0	**ND**		1.0
TPH-Gas	**ND**		100	**ND**		100
4-BFB Surrogate Recovery	95%			94%		

Date of Report: September 19, 1996
Samples Submitted: September 12, 1996
Lab Traveler: 09-027
Project: 95603-2

EPA 602 & WTPH-G

Date Extracted:	9-12-96					
Date Analyzed:	9-12-96					
Matrix: Water						
Units: ug/L (ppb)						
Lab ID:	09-027-3			09-027-4		
Client ID:	**MW10**			**MW2**		
Dilution Factor	1			1		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		1.0	**ND**		1.0
Toluene	**ND**		1.0	**23**		1.0
Ethyl Benzene	**43**		1.0	**79**		1.0
m,p-Xylene	**160**	D	10	**320**	D	10
o-Xylene	**11**		1.0	**59**		1.0
TPH-Gas	**580**		100	**900**		100
4-BFB Surrogate Recovery	96%			96%		

D-Data from 1:10 dilution.

Date of Report: September 19, 1996
Samples Submitted: September 12, 1996
Lab Traveler: 09-027
Project: 95603-2

EPA 602 & WTPH-G

Date Extracted: 9-12-96
Date Analyzed: 9-12-96

Matrix: Water
Units: ug/L (ppb)

Lab ID:	09-027-5			09-027-6		
Client ID:	**MW7**			**MW1**		
Dilution Factor	1			1000		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		1.0	**ND**		1000
Toluene	**3.0**		1.0	**ND**		1000
Ethyl Benzene	**870**	D1	100	**13000**		1000
m,p-Xylene	**1800**	D1	100	**45000**		1000
o-Xylene	**230**	D1	100	**13000**		1000
TPH-Gas	**9000**		100	**190000**		100000
4-BFB Surrogate Recovery	81%			94%		

D1-Data from 1:100 dilution.

Date of Report: September 19, 1996
Samples Submitted: September 12, 1996
Lab Traveler: 09-027
Project: 95603-2

EPA 602 & WTPH-G
METHOD BLANK QUALITY CONTROL

Date Extracted: 9-12-96
Date Analyzed: 9-12-96

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0912W1

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	91%		

Date of Report: September 19, 1996
Samples Submitted: September 12, 1996
Lab Traveler: 09-027
Project: 95603-2

EPA 602 & WTPH-G
DUPLICATE QUALITY CONTROL

Date Extracted: 9-3-96
Date Analyzed: 9-3-96

Matrix: Water
Units: ug/L (ppb)

Lab ID:	08-125-1	08-125-1	
	Original	**Duplicate**	**RPD**
Dilution Factor	1	1	
Benzene	**ND**	**ND**	NA
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	85%	88%	

Date of Report: September 19, 1996
Samples Submitted: September 12, 1996
Lab Traveler: 09-027
Project: 95603-2

EPA 602 & WTPH-G
MS/MSD QUALITY CONTROL

Date Extracted: 9-3-96
Date Analyzed: 9-3-96

Matrix: Water
Units: ug/L (ppb)

Lab ID	08-125-1		08-125-1		
spiked @ 50 ppb	**MS**	Percent	**MSD**	Percent	
Dilution Factor	1	Recovery	1	Recovery	RPD
Benzene	**43.3**	**87%**	**43.1**	**86%**	0.46
Toluene	**46.1**	**92%**	**45.9**	**92%**	0.43
Ethyl Benzene	**47.0**	**94%**	**46.9**	**94%**	0.21
m,p-Xylene	**46.1**	**92%**	**46.0**	**92%**	0.22
o-Xylene	**46.5**	**93%**	**46.3**	**93%**	0.43
4-BFB Surrogate Recovery	90%		91%		

KPH

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

09-027

CHAIN OF CUSTODY RECORD
Page 1 of 1

Project# 95603-2
Project Name
Client
Results to Henry

Sample #	Location	Sample Description	Date	Time	Sample Type	Analysis Required
MW9			9/11	1230	W	WTPH-G/BTEX
MW8				1110		
MW10				1200		G/BTEX
MW2				1355		
MW7				1450		G/BTEX
MW1				2000		11

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

Special Instructions

SIGNATURES: (Name, Company, Date and Time) Laboratory Name: OnSite

1. Relinquished by: 9/12/96 815 2. Relinquished by:

Received by: Celeste Hanson 9/12/96 8:15 Received by:

Delivered by: Hand ____ UPS ____ Airborne ____ Fed X ____ Other Rel

TABLE A:

Summary of Analytical Results
Project No. 95603-2

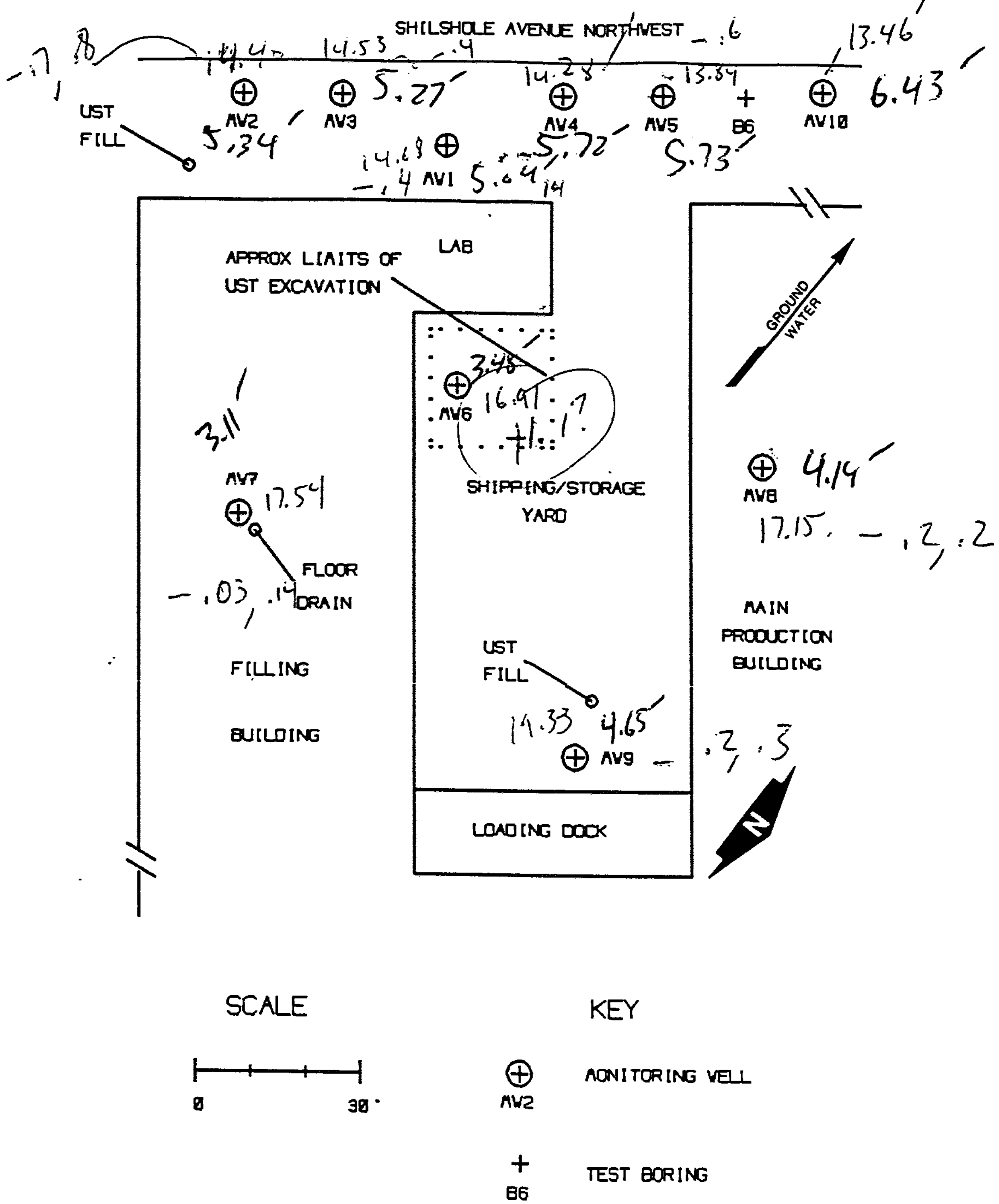
Monitoring Well	Date	Mineral Spirits (ppm)*	B (ppm)	T (ppm)	E (ppm)	X (ppm)
MW1	11/27/95	24,000	0.93	41	550	855
	06/20/96	210	.0085	0.30	14	226
	09/11/96	190	ND	ND	13	58
MW2	11/27/95	ND	ND	ND	.0066	0.027
	06/20/96	1.1	-	-	-	-
	09/11/96	0.90	ND	0.023	0.079	0.379
MW3	11/27/95	ND	ND	ND	ND	ND
MW4	11/27/95	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	-	-	-	-
	09/11/96	9.0	ND	0.003	0.87	0.203
MW8	01/29/96	ND	ND	ND	ND	0.001
	06/20/96	ND	-	-	-	-
	09/11/96	ND	ND	ND	ND	ND
MW9	01/29/96	ND	ND	ND	ND	ND
	06/20/96	ND	-	-	-	-
	09/11/96	ND	ND	ND	ND	ND
MW10	01/29/96	0.93	ND	ND	0.062	0.397
	06/20/96	1.1	-	-	-	-
	09/11/96	0.58	ND	ND	0.043	0.171
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.

Quarterly Mon - 9/11/96
C+C Paints

El - calculated 9/27/96



Notes - ① Pumped all wells first, allowed to recover, then sampled due to silt/slow recharge.
② Product visible on outside of bailer in MW1 / no layer - sheen on water, odor
③ odor during pumping/sampling MW7.
④ odors in MW10 & MW2 - organics?

Columbia Environmental Inc.

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

Seattle 206/838-7261 Tacoma 206/927-1568 Fax 206/838-5744

CHAIN OF CUSTODY RECORD

Page 1 of 1

Project# 9560J-2

Project Name

Client

Results to Henry

Sample #	Location	Sample Description	Date	Time	Sample Type	Analysis Required
MW9			9/11	1230	W	WTPH-G/BTEX
MW8				1110		
MW10				1200		G/BTEX
MW2				1355		↓
MW7				1450		G/BTEX
MW1				2000		11

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

Special Instructions

SIGNATURES: (Name, Company, Date and Time) Laboratory Name: On Site

1. Relinquished by: 9/12/96 815 2. Relinquished by:

Received by: Teresa Hanson 9/12/96 8:15 Received by:

Delivered by: Hand ____ UPS ____ Airborne ____ Fed X ____ Other Rex