



City of Bothell™

January 10, 2020

Jerome Cruz, Ecology Site Manager
Department of Ecology,
Northwest Regional Office Toxic Cleanup Program
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Re: Quarterly Progress Report for period ending December 2019

Site Name: **BOTHELL SERVICE CENTER/ SIMON & SON**
Site Address: 18107 Bothell Way NE, Bothell WA 98011
Parcel Numbers: 237420-0065
Facility/Site No.: 33215922
Consent Decree No.: 18-2-02852-3 SEA (Effective date February 2, 2018)

Reporting Period: October 1 - December 31, 2019

Summary:

City of Bothell (PLP) continues to make progress on work being performed for the Bothell Service Center site (BSCSS), in accordance with the Consent Decree (CD) with the Department of Ecology.

Per the requirements of Section XI of the Consent Decree "Progress Reports", the attached quarterly progress report has been prepared for the three-month period preceding this submittal to satisfy the terms described in the Consent Decree.

During this period the work has been geared towards continued operation of the bio-remediation system, monitoring well sampling and report preparation for the soil excavation work. Additionally, the BSCSS consent decree was amended to incorporate the Wexler Settlement Area.

The attached progress report provides an update on work accomplished during the period ending December 31, 2019. Please contact me if you have any questions.

Sincerely,

Nduta Mbuthia

Nduta Mbuthia
Project Coordinator, City of Bothell

Public Works Department
18415 101st Ave NE
Bothell, WA 98011
425.806.6800
www.bothellwa.gov



City of Bothell™

Reporting Period:	October 1 - December 31
Date submitted (electronically):	January 10, 2020
Date mailed (certified w/return receipt):	January 14, 2020
Prepared by:	Nduta Mbutia, Project Coordinator City of Bothell, Public Works Department Phone: 425.806.6829 Email: nduta.mbutia@bothellwa.gov

CONTENTS

A. A list of on-site activities that have taken place during this quarter

The following activities have occurred this quarter -

- Continued operation of the bio-remediation system
- BSCSS CD amendment to incorporate Wexler Settlement Area, executed October 31, 2019
- Draft environmental covenant for BSC transmitted to Ecology at the end of October 2019
- Groundwater sampling was completed in October; analytical data transmitted to Ecology
- Prepared a Cleanup Report for the soil excavation in the former ERH area. Report was transmitted to Ecology site manager on November 7, 2019
- Assembled BSCSS GW Isopleth figures, and time series; transmitted to Ecology Site Manager, November 27, 2019

B. Detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests:

None

C. Description of all deviations from the CAP (Exhibit C) and Schedule (Exhibit D) during the current quarter and any planned deviations in the upcoming quarter:

N/A

D. For any deviations in schedule, a plan for recovering lost time and maintaining compliance with the schedule:

N/A

- **All raw data (including laboratory analyses) received by Defendants during the past quarter and an identification of the source of the sample:**

GW monitoring Fall 2019 quarter sampling results - table attached

E. A list of deliverables for the upcoming quarter if different from the schedule:

Same as the updated schedule

Attachments

Pertinent email correspondence
Updated Exhibit D from the CD (8-13-19)
Groundwater sampling tables and maps

Jerome,

Below is a link to the assembled BSCSS GW Isopleth figures. Within the linked folder is a sub-folder entitled "Time Series Graphs" where you can find the graphs:

https://kaneenvironmental.sharepoint.com/:f:/s/ActiveProjects/82302/ElbXVR0yEF1BnmwGTAA9bOsBcqcn5gE95LOC368_c2_Yvw

Please let me know if you have any problems viewing the link or have any questions.

Thanks,

Jeff Jensen, Project Geologist

Kane Environmental, Inc. | Environmental Issues. Business Solutions.

PO Box 31936, Seattle WA 98103

Headquarters 4015 13th Avenue West, Seattle, WA 98119

Direct: 206-673-5731 Cell: 425-344-3707 Toll Free 1-844-529-KANE

Jeff@kane-environmental.com www.kane-environmental.com

Seattle, WA | Tacoma, WA | Phoenix, AZ | Nationwide Services

From: [Cruz, Jerome \(ECY\)](#)
To: [Jeff Jensen](#)
Cc: [John Kane](#); [Nduta Mbutia](#)
Subject: [EXTERNAL] RE: BSCSS - GW Isopleth Figures and Time Series Graphs
Date: Monday, December 9, 2019 9:36:24 AM

Stop! Look! Think before you click! This message originated from outside the City of Bothell network. Use caution when clicking links or opening attachments.

Hi Jeff,

If you have a master analytical data table or database used for these visualizations, could you submit those, too. While I'm asking, do you have the complete analytical data tables for the Landing, Hertz, and Paint sites? The period would be from earliest records till present. It would go back as far as the Parametrix early draft RI/FS reports and maybe earlier. I would like to start assessing the remaining COC trends and see if we can reach any conclusions that could influence cleanup of these sites, as charted in their respective FCAPs and CMPs.

Thanks,

Jerome



Jerome B. Cruz, Ph.D.
Toxics Cleanup Program, Northwest Regional Office
3190 - 160th SE Bellevue, WA 98008
Tel: (425) 649-7094 Fax: (425) 649-7098
Jerome.Cruz@ecy.wa.gov
<http://www.ecy.wa.gov/programs/tcp/cleanup.html>

From: Cruz, Jerome (ECY)
Sent: Wednesday, November 27, 2019 1:23 PM
To: 'Jeff Jensen' <Jeff@kane-environmental.com>
Cc: John Kane <jkane@kane-environmental.com>; Nduta Mbutia <Nduta.Mbutia@bothellwa.gov>
Subject: RE: BSCSS - GW Isopleth Figures and Time Series Graphs

Hi Jeff,

Confirming receipt of the files. I will get to you all if I have any questions or comments, or additional requests.

Thank you,

Jerome



Jerome B. Cruz, Ph.D.
Toxics Cleanup Program, Northwest Regional Office
3190 - 160th SE Bellevue, WA 98008
Tel: (425) 649-7094 Fax: (425) 649-7098
Jerome.Cruz@ecy.wa.gov
<http://www.ecy.wa.gov/programs/tcp/cleanup.html>

From: Jeff Jensen [<mailto:Jeff@kane-environmental.com>]
Sent: Wednesday, November 27, 2019 12:03 PM
To: Cruz, Jerome (ECY) <JCRU461@ECY.WA.GOV>
Cc: John Kane <jkane@kane-environmental.com>; Nduta Mbutia <Nduta.Mbutia@bothellwa.gov>
Subject: BSCSS - GW Isopleth Figures and Time Series Graphs

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

From: [Nduta Mbuthia](#)
To: JCRU461@ECY.WA.GOV
Cc: [John Kane](#); [Jeff Jensen](#)
Subject: CD deliverable C9 - BSCSS cleanup action report
Date: Thursday, November 7, 2019 11:38:28 AM
Attachments: [2019.11.7 Letter of Transmittal CD deliv - CAR.pdf](#)

Hi Jerome,

Please find attached, a letter of transmittal for the BSCSS cleanup action report, identified as CD deliverable C9 on Exhibit D. You may download the electronic file from page 2 of the attachment. John will mail two hard copies to Ecology for your records, thanks

Nduta

Please note: Email exchanges may be public records and subject to disclosure.



City of Bothell™

Public Works Department

City Hall
18415, 101st Ave NE
Bothell, WA 98011

LETTER OF TRANSMITTAL

Phone (425) 806-6800
Fax (425) 806-6130

Date: November 7, 2019

Company: Department of Ecology
Attn: Jerome Cruz
Address: NWRO Toxics Cleanup
Program 3190 - 160th SE
Bellevue, WA 98008

From: Nduta Mbuthia, Capital Projects Engineer, Public Works

Attached please find:

The following CD deliverable for BSCSS:

- Cleanup Action Report, (deliverable C9) for Bothell Service Center

For your review & comments

At your request

Returned for correction

Other:

For your action

Approved as noted

Please return all copies

Comments: 2 Hard Copies **also** sent by USPS mail

cc: Project File

From: [Jeff Jensen](#)
To: [Nduta Mbuthia](#)
Cc: [John Kane](#)
Subject: [EXTERNAL] RE: BSC cleanup action report
Date: Thursday, November 7, 2019 10:19:57 AM
Attachments: [BSCSS - DRAFT Cleanup Action Report - 2019-10-29 v.2.doc](#)

Stop! Look! Think before you click! This message originated from outside the City of Bothell network. Use caution when clicking links or opening attachments.

Nduta,

Attached is a word copy of the Draft Cleanup Action Plan with your changes accepted. Below is a link to the assembled pdf:

https://kaneenvironmental.sharepoint.com/:b:/s/ActiveProjects/82302/EbukT31iZcFNsFsVo0VjMmYBpxd8A46xNmp7xB4bFiN_MQ

Let me know if you have any problems opening the link or have any questions.

Thanks,

Jeff Jensen, Project Geologist

Kane Environmental, Inc. | Environmental Issues. Business Solutions.

PO Box 31936, Seattle WA 98103

Headquarters 4015 13th Avenue West, Seattle, WA 98119

Direct: 206-673-5731 Cell: 425-344-3707 Toll Free 1-844-529-KANE

From: [Jeff Jensen](#)
To: [Cruz, Jerome \(ECY\)](#)
Cc: [John Kane](#); [Nduta Mbutia](#)
Subject: [EXTERNAL] BSCSS - GW Analytical Results
Date: Wednesday, November 27, 2019 9:09:32 AM
Attachments: [BSCSS - Laboratory Analytical Reports - 2019-10.pdf](#)
[BSCSS - Table 1 - GW Analytical Data.pdf](#)

Stop! Look! Think before you click! This message originated from outside the City of Bothell network. Use caution when clicking links or opening attachments.

Jerome,

I have attached the groundwater analytical results for BSCSS which include the most recent Fall 2019 sampling event. I have also attached the laboratory analytical reports. Later today I will also be sending over the BSCSS GW Isopleth Figures and Time Series Graphs for your review.

Thanks,

Jeff Jensen, Project Geologist

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Exhibit D
Site Schedule of Work and Deliverables

Deliverables	Due (Calendar Days)	
A. Administrative		
A.1	Consent Decree entered by the King County Superior Court (Effective Date of the CD)	Within 5 days of the execution by the Parties
A.2	Notification of selected contractor name and qualifications	Within 5 days of the effective date of Consent Decree (A.1)
A.3	Progress Reports	Quarterly on the 10 th of the month beginning after the effective date of the Consent Decree (A.1)
A.4	Financial Assurances – submit cost estimate for Ecology review and approval	Within 60 days of the effective date of Consent Decree
A.5	Financial Assurances - provide proof of financial assurances	Within 60 days after Ecology approves cost estimate (A.4)
B. Design		
B.1	Draft Pre-Remedial Design (PRDI) Project Plans ²	Within 5 days of the effective date of Consent Decree (A.1)
B.2	Draft PRDI Data Report and Draft Engineering Design Report (EDR) ³	Within 5 days of Ecology approval of Final PRDI Project Plans (B.1)
B.3	Final PRDI Data Report and EDR Report	Within 5 days of receipt of Ecology's comments on the Draft PRDI Data and EDR Reports (B.2)
B.4	90 % Plans and Specs [per WAC 173-340-400(4)(b)]	Within 5 days of receipt of Ecology comments on Final EDR Report (B.3)
B.5	100 % Plans and Specs	Within 5 days of receipt of Ecology comments on 90 % plans and specifications (B.4)
C. Field Construction		
C.1	Complete Construction Procurement	Within 5 days of completion of the 100% plans and specifications (B.1)
C.2	ERH System installation	Within 2 months of the effective date of Consent Decree
	ERH Operation	Within 6 to 8 months of the effective date of Consent Decree
C.3	Start install and begin operation of bioremediation-groundwater recirculation/SVE systems	Within 2 months of the effective date of Consent Decree
C.4	Install compliance monitoring well network	Within 2 months of the effective date of Consent Decree
C.5	Complete Construction	Within 2 months of the effective date of Consent Decree
C.6	ERH soil performance sampling	Within 6 to 8 months of the effective date of Consent Decree
C.7	Contingent soil excavation in ERH treatment area	Within 6 to 9 months of the ERH system shutdown

C.8	Decommission ERH; install and operate SVE system	Within 4 to 6 weeks of ERH system final shutdown. SVE system operation beginning March 2019.
C.9	Cleanup Action Report and As-Built Drawings and Report; Draft Environmental Covenant(s); and an updated Title Report	Within 60 days of decommission of SVE systems
D. Post Construction Work		
D.1	Final Environmental Covenant(s)	Within 30 days of receipt of Ecology comments on the Draft Environmental Covenant(s).
D.2	Record Final Environmental Covenant(s) with King County Auditor	Within 5 days after completion of the Final Environmental Covenant or Ecology's signature as grantee of the Final Environmental Covenant(s), whichever occurs last.
D.3	Performance Groundwater Monitoring Quarterly Performance Monitoring Biannual Performance Monitoring	Quarterly performance monitoring for one year starting Summer 2019; Biannual performance monitoring until PCE, and its breakdown products reach their applicable cleanup levels in the selected performance monitoring wells provided in CAP
D.4	Decommission Bioremediation/Groundwater Recirculation system	Upon attainment of cleanup levels in performance monitoring wells
D.5	Indoor Air Sampling (two rounds)	1st round - post-construction and pre-occupation of buildings 2nd round - upon completion of Groundwater Closure report per Section 7.0 of the BSCSS Final CAP
D.6	Groundwater Confirmation Monitoring Quarterly Compliance Monitoring	Quarterly for two years following completion of performance monitoring. As described in CAP, contingency of an additional year of quarterly sampling if cleanup levels not attained. After one additional year, if COC groundwater cleanup levels have not been reached, include a 5-year compliance sampling event for the duration of the environmental covenant.
D.7	As Built Drawings and Report of vapor intrusion mitigation measures (vapor barrier and passive venting systems), and other engineering and institutional controls (if any).	Within 30 days of the City's receipt from the developer
D.8	Five Year Compliance Monitoring and Periodic Review reports	To follow Groundwater compliance monitoring (D.6). Groundwater monitoring required once every five years for the duration of the institutional controls on groundwater (if present) under the environmental covenant.

- 1) *Schedule is in calendar days. Deliverable due date may be modified with Ecology concurrence without amendment to the Consent Decree.*
- 2) *Project Plans include the following: Work Plan, Sampling and Analysis Plan, Quality Assurance Project Plan, and Health and Safety Plan, to be submitted for Ecology review and approval. All plans will include a schedule for implementation as applicable.*
- 3) *The Engineering Design Report includes: a Construction Quality Assurance Project Plan, a Compliance Monitoring and Contingency Response Plan, Proposed Best Management Practices, Water Quality Monitoring Plan, and Substantive Requirements of Procedurally Exempt Permits. Ecology will not approve the Final EDR until the required permits have been obtained.*

**Table 1
Bothell Service Center Simon Son
Groundwater Analytical Results**

Well	Well Type and Water Bearing Zone	Screened Depth, (ft bgs)	Top of Casing (TOC) Elevation (feet)*	Date Sampled	Depth to Water (ft below TOC)	GW Elevation (feet)	Sampled By	PCE (µg/L)	TCE (µg/L)	(cis) 1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	pH (units)	Temp (°C)	Conductivity (µS)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Dissolved Iron (ug/L)	Sulfate (mg/L)	Chloride (mg/L)	Ammonia as N (mg/L)	Methane (mg/L)	Ethane (mg/L)	Ethene (mg/L)	Total Organic Carbon (mg/L)		
				10/24/16	4.64	38.89	Kane	17	<0.20	<0.20	<0.20	6.74	16.5	140.0												
				10/23/18	6.80	36.73	Kane	9.1	<0.50	<1.0	<0.20	6.59		161.0												
				6/6/19	6.00	37.53	Kane	8.9	<0.20	<0.20	<0.20	6.25	14.4	256.6	3.46	5	<56	50	4.6	<0.050	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	1.4
				7/24/19	6.61	36.92	Kane	6.5	<0.20	<0.20	<0.020	6.01	18.8	200.8	3.10	-74.5	<56	26	4.8	0.15	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<1.0
				10/23/19	6.18	37.35	Kane	7.3	<0.20	<0.20	<0.020	5.92	15.4	162.8	3.82	164.3	<56	23	4.2	<0.050	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<1.0
S-MW-2	Shallow	5 to 15	42.297	9/20/16	6.21	36.09	Kane	47	7	26	<0.40	6.41		339.0												
				10/24/16	3.95	38.35	Kane	35	20	69	5.1	6.83	17.8	349.0												
				9/21/18	6.03	36.27	Kane	10.3	4.74	3.66	<0.20	6.80	18.4	246.0	0.12	105.6	<100	19.3	4.29	<0.100	<0.00863	<0.0162	<0.0151	2.25		
				1/2/19	4.40	37.90	Kane	7.55	4.2	5.02	<0.20	6.45		278.4	0.11	34.7	<100	19	4.74	<0.100	<0.00863	<0.0162	<0.0151	1.02		
				6/6/19	5.14	37.16	Kane	5.8	3.8	3.2	<0.20	6.68	15.6	363.7	0.25	0.5	<56	35	6.6	<0.050	0.033	<0.0025	<0.0025	1.6		
				7/24/19	5.34	36.96	Kane	6.2	3.8	4.1	0.11	6.18	18.5	338.0	0.14	-129.2	<56	21	7.4	<0.050	0.027	<0.0005	<0.0005	<0.0005	1.3	
				10/17/19	5.26	37.04	Kane	5.8	3.7	4.2	0.11	6.34	17.6	245.9	0.10	193.1	<56	26	6.9	<0.050	0.023	<0.0005	<0.0005	<0.0005	1.6	
S-MW-3	Intermediate	25 to 35	42.807	9/16/16	6.62	36.19	Kane	0.44	<0.20	<0.20	<0.20	5.79		116.0												
				10/31/16	4.93	37.88	Kane	1.7	<0.20	<0.20	<0.20	6.04	15.9	116.0												
				9/21/18	6.51	36.30	Kane	3.8	<0.50	<1.00	<0.20	5.95	14.8	95.0	0.24	80.3	<100	13.7	2.82	<0.100	0.0652	<0.0162	<0.0151	1.24		
				1/3/19	5.17	37.64	Kane	2.28	<0.50	<1.00	<0.20	5.57		103.2	0.14	49	<100	15	3.63	<0.100	0.0994	<0.0162	<0.0151	0.723		
				6/5/19	6.05	36.76	Kane	2.2	<0.20	<0.20	<0.20	5.88	14.5	113.8	0.19	-9.3	<56	13	3.6	<0.050	0.49	<0.025	<0.025	<1.0		
				7/24/19	6.75	36.06	Kane	2.8	<0.20	<0.20	<0.020	5.31	16.5	108.6	0.14	-177.5	<56	12	3.9	<0.050	0.47	<0.0005	<0.0005	<0.0005	<1.0	
				10/17/19	6.08	36.73	Kane	3.7	<0.20	<0.20	<0.020	5.20	15	84.7	0.14	218.6	<56	13	4.4	<0.050	0.51	<0.0005	<0.0005	<0.0005	<1.0	
S-MW-4	Deep	40 to 50	42.367	9/14/16	6.32	36.05	Kane	<0.20	<0.20	<0.20	<0.20	6.74		206.0												
				10/28/16	4.93	37.44	Kane	0.66	<0.20	<0.20	<0.20	6.44		191.0												
				7/19/18	6.23	36.14	Kane	1.25	<0.50	<1.00	<0.20	6.85	14.6	183.0	0.46											
				9/21/18	6.37	36.00	Kane	<1.00	<0.50	<1.00	<0.20	6.58	15.4	200.0	0.08	95.8	621	15	6.13	0.133	0.0092	<0.0162	<0.0151	2.37		
				1/2/19	5.90	36.47	Kane	<1.00	<0.50	<1.00	<0.20	6.15		202.9	0.09	56.9	449	14.5	6.18	<0.100	0.0132	<0.0162	<0.0151	1.52		
				6/5/19	6.04	36.33	Kane	0.56	<0.20	<0.20	<0.20	6.17	14.7	153.2	0.15	-4.6	410	15	4.5	<0.050	0.084	<0.005	<0.005	<1.0		
S-MW-5	Shallow	15 to 25	41.357	10/28/16	4.56	36.80	Kane	340	<4.0	<4.0	<4.0	6.68	18.0	259.0												
				9/24/18	6.07	35.29	Kane	530	<5.0	<10	<2.0	6.38	16.2	164.0	2.17	48.5	<100	12.6	6.05	<0.100	<0.00863	<0.0162	<0.0151	1.36		
				12/27/18	3.90	37.46	Kane	1,690	6.03	16.7	<0.20	6.31		235.5	0.98	58.2	<100	21.6	6.56	<0.100	<0.00863	<0.0162	<0.0151	0.506		
				6/5/19	5.20	36.16	Kane	880	<10	<10	<10	6.57	15.2	205.1	1.81	7.3	<56	19	5.9	<0.050	<0.001	<0.0005	<0.0005	<0.0005	<1.0	
				7/24/19	5.72	35.64	Kane	530	<4.0	<4.0	<0.40	6.22	17.6	169.8	1.93	-76.1	<56	15	7.5	<0.050	<0.001	<0.0005	<0.0005	<0.0005	<1.0	
				10/17/19	5.88	35.48	Kane	820	<4.0	<4.0	<0.40	6.05	15.8	159.8	1.78	198.6	<56	17	5.3	<0.050	<0.001	<0.0005	<0.0005	<0.0005	<1.0	
S-MW-6	Shallow	4 to 14		1/3/17	5.51		Kane	<0.20	<0.20	<0.20	<0.20	6.23		155.0												
				1/11/19	5.54		Kane	<1.00	<0.50	<1.00	<0.20	6.11		129.0												
				6/7/19	7.57		Kane	<0.20	<0.20	<0.20	<0.20	6.1	13.5	182.8	4.90	8.7	<56	29	7.3	<0.050	0.0016	<0.0005	<0.0005	<0.0005	<1.0	
MTCA Method A Cleanup Level ¹								5.0	5.0	0.2																
MTCA Method B Cleanup Level ²										16						11,200										

* HWA TOC elevation was used to calculate GW elevation during HWA sampling events.

Notes:

- PCE – Tetrachloroethene
- TCE – Trichloroethene
- 1,1-DCE - 1,1-Dichloroethene
- (cis) 1,2-DCE - (cis) 1,2-Dichloroethene
- (trans) 1,2-DCE - (trans) 1,2-Dichloroethene
- Blank – Not analyzed or not available
- Bold** – Analyte detected
- Bold / highlighted** – Analyte exceeds MTCA A/B cleanup level
- Italicized* - Detection limit exceeds respective cleanup level
- < – Analyte not detected at listed reporting limit
- mg/L – micrograms per liter
- MV – Millivolts
- ES – Estimated concentration because analyte concentration was outside of lab instrument calibration range
- DNAPL – Dense Non-Aqueous Phase Liquid
- 1 – Table 720-1, WAC 173-340-900
- 2 – WA Dept. of Ecology CLARC ground water data table (<https://fortress.wa.gov/ecy/clarc/FocusSheets/Groundwater%20Methods%20B%20and%20A%20and%20ARARs.pdf>)
- NA – Not Applicable

- Well was not sampled by Kane

* HWA TOC elevation was used to calculate GW elevation during HWA sampling events.