



May 24, 2024

Vance Atkins
Toxics Cleanup Program
Washington State Department of Ecology
PO Box 330316
Shoreline, Washington 98133-9716

**RE: AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM SHUTDOWN AND EVALUATION PLAN
CHS AUBURN SITE
238 8TH STREET SOUTHEAST
AUBURN, WASHINGTON
FARALLON PN: 301-004**

Dear Vance Atkins:

Farallon Consulting, L.L.C. (Farallon) has prepared this letter on behalf of CHS Inc. (CHS) to request to shut down the air sparge/soil vapor extraction (AS/SVE) system currently operating at the CHS Auburn facility at 238 8th Street Southeast in Auburn, Washington (CHS Auburn Facility). A Site vicinity map is provided on Figure 1, and a Site plan is provided on Figure 2. This letter includes a proposed plan to evaluate the effects on groundwater quality following discontinuation of active treatment, and decision criteria for reactivation of the AS/SVE system, if necessary.

BACKGROUND

The Final Cleanup Action Plan,¹ Exhibit B of Consent Decree No. 18-2-15430-8 dated June 20, 2018 included installation of additional AS wells and expansion of the previous AS/SVE system to reduce concentrations of (COCs) in groundwater. The COCs for Site groundwater are total petroleum hydrocarbons as diesel-range organics (DRO), as oil-range organics (ORO), and as gasoline-range organics (GRO); and benzene, toluene, ethylbenzene, and xylenes (BTEX). The previous AS/SVE system consisted of three subsystems: a perimeter AS/SVE system installed in 1994 (AS wells AS-1, and AS-11 through 16 and SVE wells SV-1 through SV-3 and SV-10 through SV-16), a down-gradient AS/SVE system installed in 1995 (AS wells DAS-1 through DAS-12 and SVE wells DSVE-1 through DSVE-14), and a central AS/SVE system installed in 1996 (AS wells CAS-1 through CAS-5, CAS-7 through CAS-13 and

¹ Ecology. 2018. *Final Cleanup Action Plan, CHS Auburn Site, 238 8th Street Southeast and Contiguous Areas, Auburn, Washington, Agreed Order No. 4033, Facility Site No. 2487*. May 8.



SVE wells CSVE-1, and CSVE-4 through CSVE-8) (Figure 3). Portions of the perimeter, down-gradient, and central AS/SVE systems were turned off with Ecology approval between the late 1990s and 2007. The down-gradient AS/SVE system was decommissioned in 2010 due to road improvements by the City of Auburn to D Street Southeast.

The current configuration of the AS/SVE system includes AS wells CAS-1 through CAS-22 and SVE wells CSVE-1, CSVE-5, CSV-7, CSVE-9, and CSVE-10, and has been operating at the Site since June 2019² with the objective of reducing concentrations of COCs in groundwater to less than MTCA Method A cleanup levels within a reasonable restoration time frame. The current operating AS wells include CAS-1, CAS-2, and CAS-14 through CAS-20, and the current operating SVE wells include CSVE-1, CSVE-5, CSV-7, CSVE-9, and CSVE-10. The current AS/SVE system is shown on Figure 4.

The expanded area of influence of the reconfigured AS/SVE system appears to continue to mobilize dissolved-phase DRO/ORO and associated polar metabolites from the smear zone soil, as shown by a general increase in DRO and ORO concentrations in groundwater following the AS/SVE system start-up in June 2019 in several Site monitoring wells. GRO concentrations in groundwater have shown a decrease to less than the MTCA Method A cleanup level in monitoring wells CMW-12 and HMW-11 following operation of the AS/SVE system but GRO at concentrations exceeding the MTCA Method A cleanup level have been detected in groundwater samples collected from monitoring well CMW-27 seasonally over the last 2 years and generally have correlated with lower groundwater elevations.³

Except for intermittent shut-downs, the current configuration of the AS/SVE system has operated continuously from start-up in June 2019 to present and has removed a total of 2.84 pounds of benzene and 174.94 pounds of GRO at the Site. The mass of benzene removed by the AS/SVE system has decreased to asymptotic levels since June 2019. The AS/SVE system is currently removing a de-minimis benzene mass (Table 1; Chart 1). The current AS/SVE system is continuing to remove some GRO mass (Table 1; Chart 1). However, the mass of GRO currently being removed also appears to be reaching asymptotic levels as GRO has not been detected at a concentration exceeding laboratory practical quantitation limit for the past two monitoring events (Table 2).

² Start-up testing of the AS/SVE system was conducted on May 29, 2019. The AS/SVE system was started for continuous operation on June 13, 2019.

³ Farallon. 2024. *Third and Fourth Quarter 2023 Groundwater Monitoring and Treatment System Operation and Maintenance Report, CHS Auburn Site, Auburn, Washington*. February 23.



An assessment of the potential for natural attenuation to reduce concentrations of residual petroleum hydrocarbon constituents in groundwater via biodegradation processes was conducted during the May 2023 monitoring event. The results of the natural attenuation assessment indicated that groundwater conditions are generally aerobic and that sufficient electron receptors are present to support natural attenuation processes in groundwater. Natural attenuation appears to be a technically feasible alternative for remediation of residual petroleum contamination in groundwater.⁴

SHUTDOWN EVALUATION

Due to the de-minimis COC mass removal by the AS/SVE system, a shut-down to evaluate the effects on COCs in groundwater, including the generation of polar metabolites from ongoing biodegradation processes, appears to be warranted.

To evaluate the effects of a shutdown of the AS/SVE system, collection of groundwater samples following Ecology natural attenuation guidance⁵ will be conducted. Groundwater samples would be collected from key Site wells to evaluate the effects of system shutdown on COC concentrations and groundwater geochemistry. Groundwater samples would be collected quarterly for 1 year for COCs and natural attenuation parameters from the following monitoring wells, which are also depicted on Figures 5 through 7:

- Up-gradient monitoring well CMW-25;
- Source area/plume centerline monitoring wells HMW-11, CMW-2, CMW-10, and CMW-27; and
- Down-gradient monitoring well CMW-31.

Groundwater samples would be analyzed for following:

- DRO and ORO by Northwest Method NWTPH-Dx with and without silica gel cleanup procedure;
- GRO by Northwest Method NWTPH-Gx;
- BTEX constituents by U.S. Environmental Protection Agency (EPA) Method 8260;

⁴ Farallon. 2023. *First and Second Quarter 2023 Groundwater Monitoring and Treatment System Operation and Maintenance Report, CHS Auburn Site, Auburn, Washington*. September 11.

⁵ Ecology. 2005. *Guidance on Remediation of Petroleum-Contaminated Groundwater By Natural Attenuation*. Publication No. 05-09-091. July.



- Sulfate by American Society for Testing Materials Method D516-11;
- Nitrate by EPA Method 353.2;
- Dissolved methane Risk Based Standards Method 175; and
- Total alkalinity by SM 2320B.

Ferrous iron and manganese will be measured in the field along with pH, temperature, specific conductivity, dissolved oxygen, and oxidation-reduction potential. The groundwater monitoring would include measuring depth to groundwater in the select monitoring wells and sample collection following the field methods used previously at the Site.

If COC concentrations in the monitoring wells sampled for the shutdown evaluation exceed action levels for two consecutive quarters, Ecology will be consulted to evaluate whether the AS/SVE system should be turned back on or the effects of the shutdown should continue to be evaluated for the full four quarters. Action levels for source area/plume centerline monitoring wells HMW-11, CMW-2, CMW-10, and CMW-27 are concentrations of DRO, ORO, or GRO exceeding the highest detected concentration in that well since the AS/SVE system startup in June 2019 (Table 3).

SCHEDULE

Following Ecology approval, the quarterly groundwater monitoring would begin approximately 3 months after shutdown of the AS/SVE system to allow groundwater conditions to equilibrate before the first sampling event. Four consecutive quarterly sampling events would be completed beginning 3 months following the shutdown.

Quarterly Progress Reports would be submitted following the current schedule the Consent Decree via electronic mail and will include a description of the Site activities conducted during the reporting period, copies of analytical data, and a schedule of upcoming work and summary figures/tables with the analytical data. A summary report detailing the quarterly monitoring results along with an evaluation of the effects of the AS/SVE system shutdown would be prepared and submitted to Ecology approximately 45 days after receipt and validation of the laboratory analytical report from the fourth quarterly groundwater monitoring event.

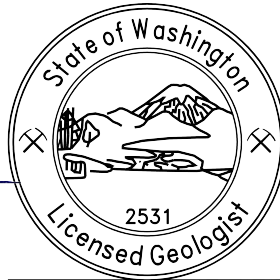


Please contact either of the undersigned at (425) 295-0800 if you have questions or need additional information.

Sincerely,

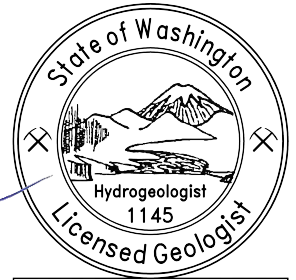
Farallon Consulting, L.L.C.

Tracey Mulhern, L.G.
Associate Geologist



Tracey A. Mulhern

Jeffrey Kaspar, L.G., L.H.G.
Principal Geologist



Jeffrey Kaspar

Attachments: Figure 1, *Site Vicinity Map*
Figure 2, *Site Plan*
Figure 3, *Site Plan Showing Perimeter, Down-Gradient, and Central AS/SVE Systems*
Figure 4, *Site Plan Showing Detail of the Central Area of the Site*
Figure 5, *Groundwater Elevation Contour Map, November 2023*
Figure 6, *May 2023 Geochemical Parameters*
Figure 7, *November 2023 Groundwater Analytical Results for DRO, ORO, GRO, and BTEX*
Table 1, *SVE System and Well Data*
Table 2, *Air Analytical Data*
Table 3, *Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater – January 2018 through November 2023*
Chart 1, *Cumulative Pounds of Benzene and GRO Removed*

cc: Shawna Conroy, CHS Inc.
William Joyce, Hillis Clark Martin & Peterson P.S.
Jacob Blair, Hillis Clark Martin & Peterson P.S

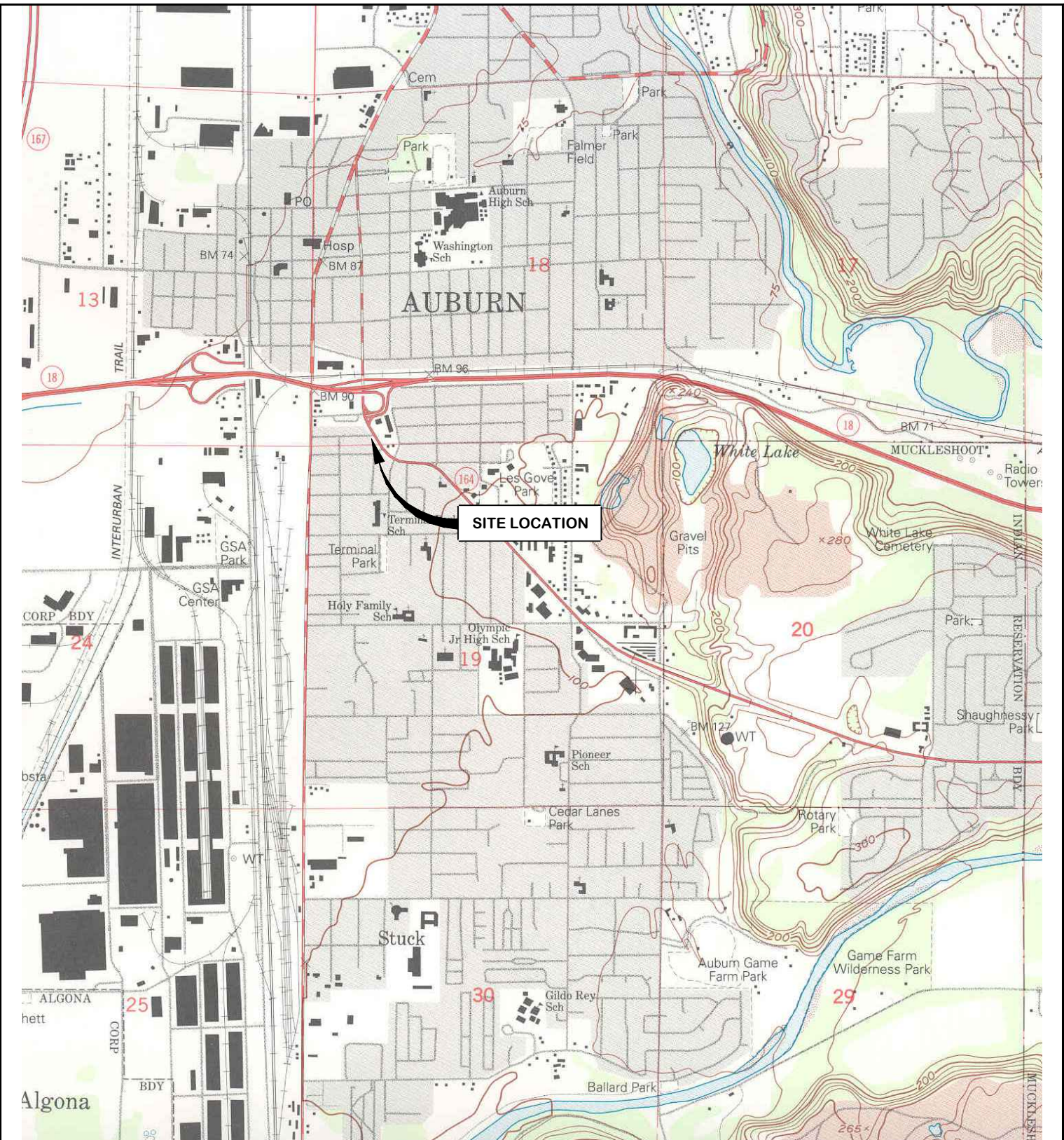
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FIGURES

AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM SHUTDOWN
AND EVALUATION PLAN
CHS Auburn Site
238 8th Street Southeast
Auburn, Washington

Farallon PN: 301-004

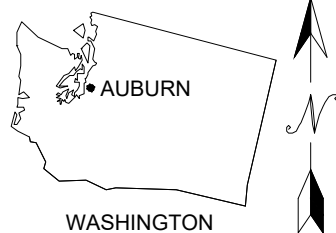
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SITE LOCATION

REFERENCE: 7.5 MINUTE USGS QUADRANGLE AUBURN, WASHINGTON. DATED 1949 AND PHOTOREVISED 1994

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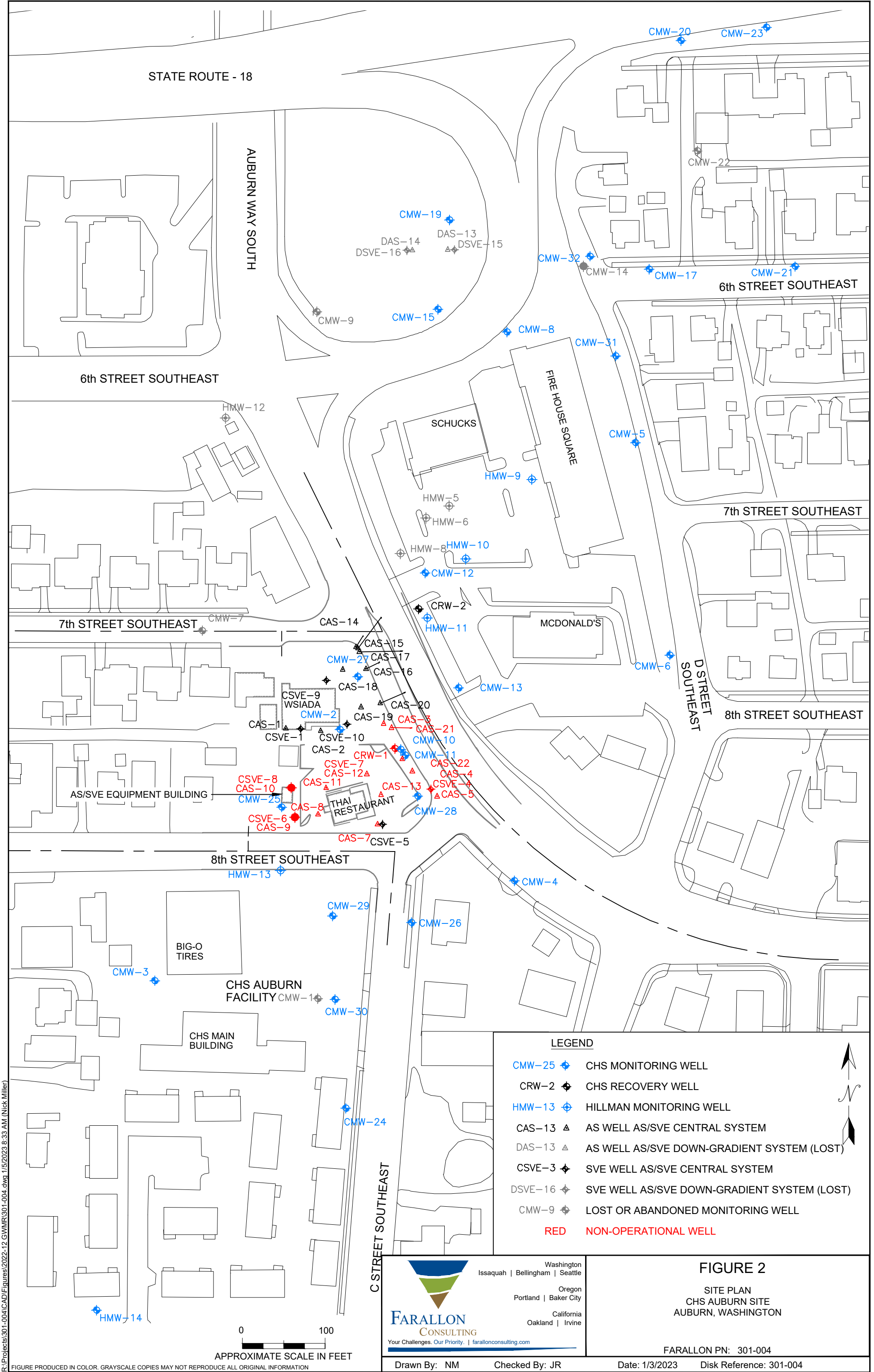
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FIGURE 1

**SITE VICINITY MAP
CHS AUBURN SITE
AUBURN, WASHINGTON**

Drawn By: NM Checked By: GP

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LEGEND

- CMW-25 ◆ CHS MONITORING WELL
- CRW-2 ◆ CHS RECOVERY WELL
- HMW-13 ◆ HILLMAN MONITORING WELL
- CAS-13 ▲ AS WELL AS/SVE CENTRAL SYSTEM
- DAS-13 ▲ AS WELL AS/SVE DOWN-GRADIENT SYSTEM (LOST)
- CSVE-3 ◆ SVE WELL AS/SVE CENTRAL SYSTEM
- DSVE-16 ◆ SVE WELL AS/SVE DOWN-GRADIENT SYSTEM (LOST)
- CMW-9 ◆ LOST OR ABANDONED MONITORING WELL
- RED NON-OPERATIONAL WELL



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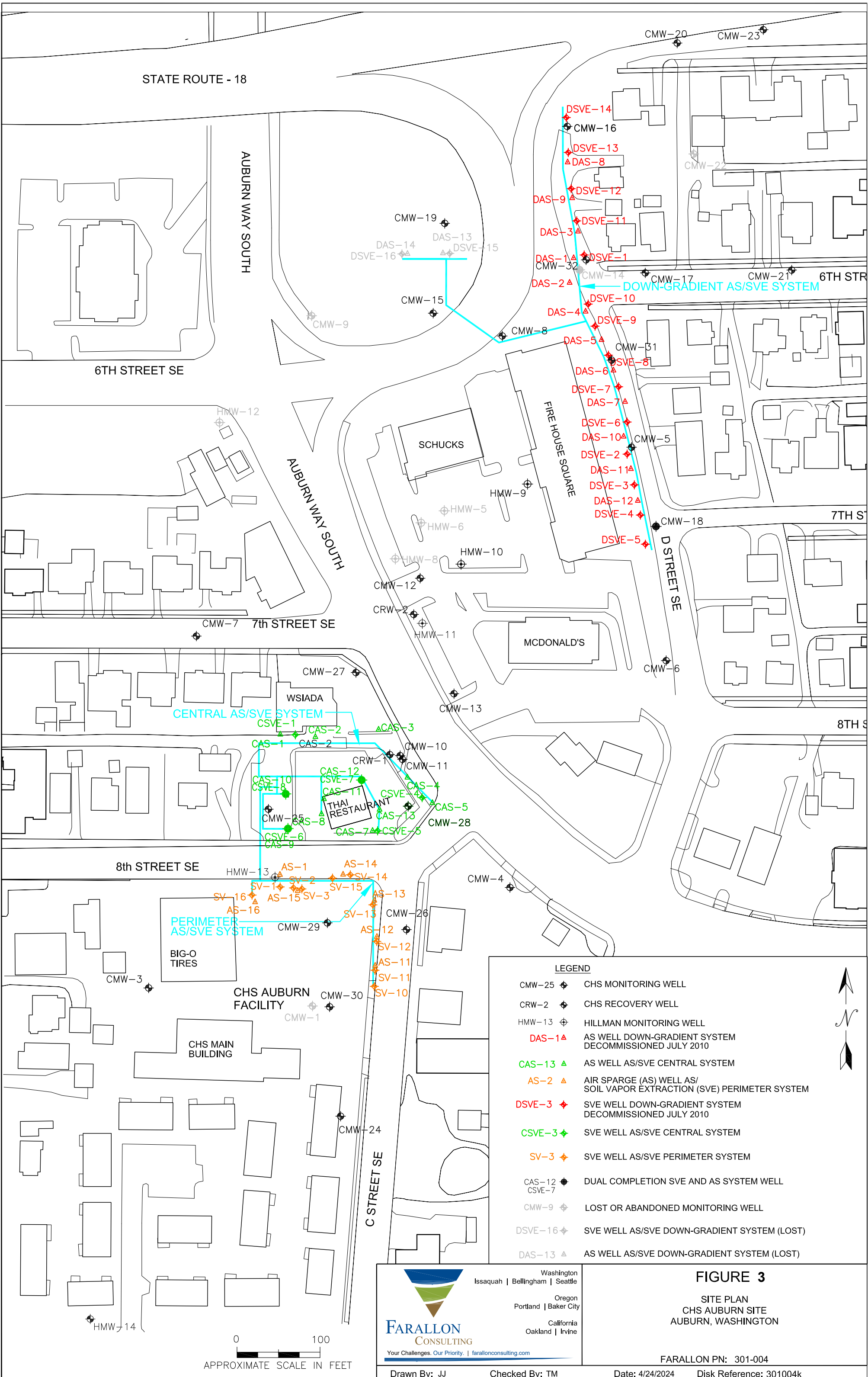
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FIGURE 2
SITE PLAN
CHS AUBURN SITE
AUBURN, WASHINGTON

FARALLON PN: 301-004

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LEGEND

CMW-25	◆	CHS MONITORING WELL
CRW-2	◆	CHS RECOVERY WELL
HMW-13	⊕	HILLMAN MONITORING WELL
DAS-1A	▲	AS WELL DOWN-GRADIENT SYSTEM DECOMMISSIONED JULY 2010
CAS-13	▲	AS WELL AS/SVE CENTRAL SYSTEM
AS-2	▲	AIR SPARGE (AS) WELL AS/ SOIL VAPOR EXTRACTION (SVE) PERIMETER SYSTEM
DSVE-3	◆	SVE WELL DOWN-GRADIENT SYSTEM DECOMMISSIONED JULY 2010
CSVE-3	◆	SVE WELL AS/SVE CENTRAL SYSTEM
SV-3	◆	SVE WELL AS/SVE PERIMETER SYSTEM
CAS-12 CSVE-7	◆	DUAL COMPLETION SVE AND AS SYSTEM WELL
CMW-9	◆	LOST OR ABANDONED MONITORING WELL
DSVE-16	◆	SVE WELL AS/SVE DOWN-GRADIENT SYSTEM (LOST)
DAS-13	▲	AS WELL AS/SVE DOWN-GRADIENT SYSTEM (LOST)



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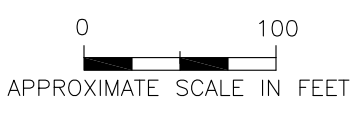
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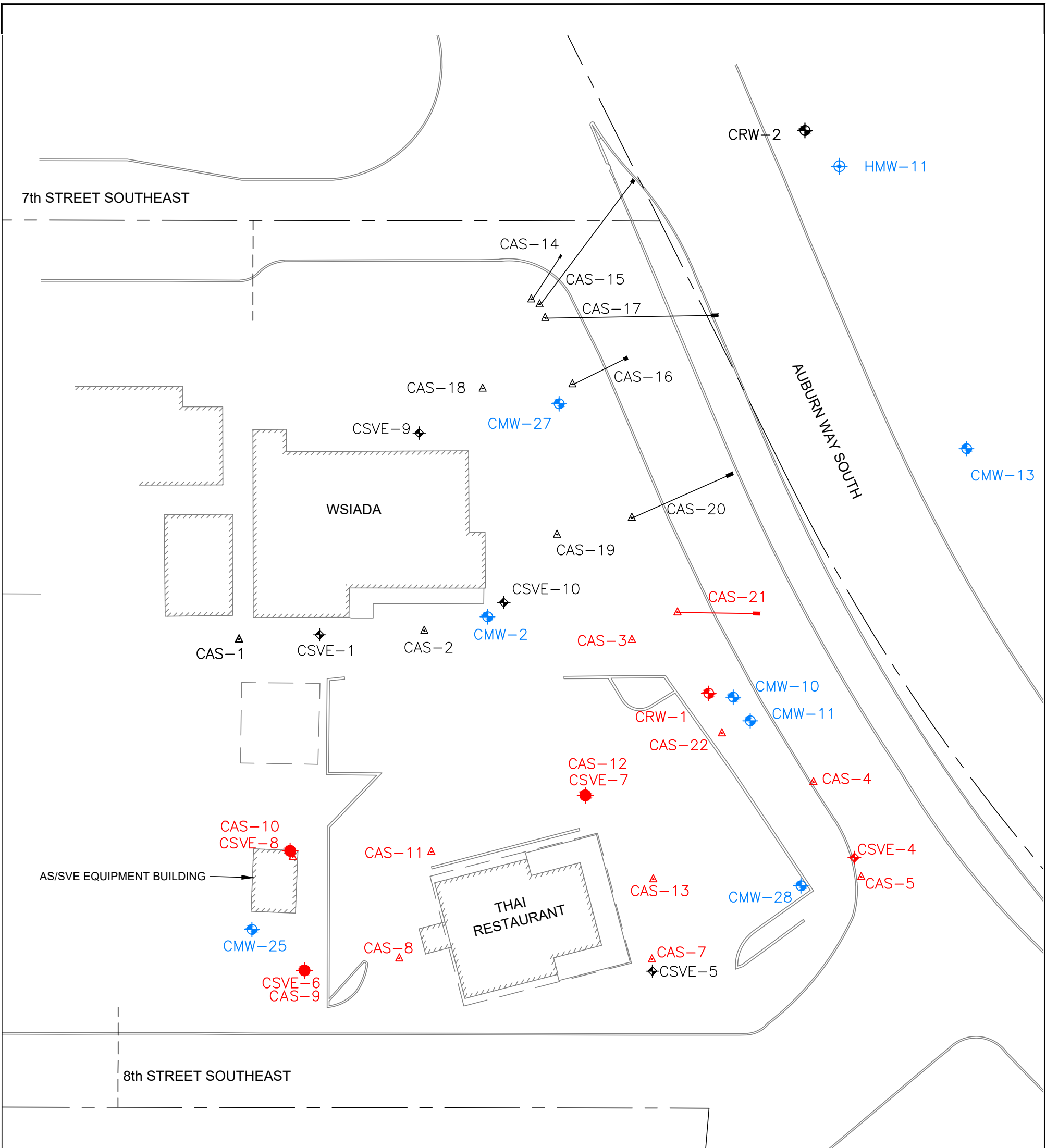
FIGURE 3

SITE PLAN
CHS AUBURN SITE
AUBURN, WASHINGTON

FARALLON PN: 301-004

Drawn By: JJ Checked By: TM Date: 4/24/2024 Disk Reference: 301004k





LEGEND

- CMW-25 CHS MONITORING WELL
- CRW-2 CHS RECOVERY WELL
- HMW-13 HILLMAN MONITORING WELL
- CAS-13 AS WELL AS/SVE CENTRAL SYSTEM
- CSVE-3 SVE WELL AS/SVE CENTRAL SYSTEM
- CAS-12 DUAL COMPLETION SVE AND AS SYSTEM WELL
- CSVE-7 DUAL COMPLETION SVE AND AS SYSTEM WELL
- RED NON-OPERATIONAL WELL



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FIGURE 4

SITE PLAN SHOWING DETAIL OF THE
CENTRAL AREA OF THE SITE
CHS AUBURN SITE
AUBURN, WASHINGTON

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STATE ROUTE - 18

AUBURN WAY SOUTH

6th STREET SOUTHEAST

6th STREET SOUTHEAST

7th STREET SOUTHEAST

7th STREET SOUTHEAST

8th STREET SOUTHEAST

8th STREET SOUTHEAST

C STREET SOUTHEAST

D STREET SOUTHEAST

SCHUCKS

FIRE HOUSE SQUARE

MCDONALD'S

WSIADA







THAI RESTAURANT

BIG-O TIRES

CHS AUBURN FACILITY

CHS MAIN BUILDING

LEGEND

- CMW-26  CHS MONITORING WELL
- HMW-13  HILLMAN MONITORING WELL
-  MONITORING WELL SAMPLED FOR SHUTDOWN EVALUATION
- (68.27)  GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
-  GROUNDWATER ELEVATION CONTOUR DASHED WHERE INFERRED
-  APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- * INDICATES GROUNDWATER ELEVATION FROM SAMPLING PURGE FORM



APPROXIMATE SCALE IN FEET



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FIGURE 5
GROUNDWATER ELEVATION CONTOUR MAP
NOVEMBER 2023
CHS AUBURN SITE
AUBURN, WASHINGTON

FARALLON PN: 301-004

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Checked By: TM

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STATE ROUTE - 18

AUBURN WAY SOUTH

6th STREET SOUTHEAST

6th STREET SOUTHEAST

7th STREET SOUTHEAST

7th STREET SOUTHEAST

8th STREET SOUTHEAST

8th STREET SOUTHEAST

C STREET SOUTHEAST

SCHUCKS

THAI RESTAURANT

AS/SVE EQUIPMENT BUILDING

BIG-O TIRES

CHS AUBURN FACILITY

CHS MAIN BUILDING

TEMP	pH	ORP	DO	NITRATE	SULFATE	FERROUS IRON	DISSOLVED MANGANESE	DISSOLVED METHANE	TOTAL ALKALINITY
14.4	6.12	162.7	1.99	0.46	9.6	<0.150	<0.011	<0.55	84

TEMP	pH	ORP	DO	NITRATE	SULFATE	FERROUS IRON	DISSOLVED MANGANESE	DISSOLVED METHANE	TOTAL ALKALINITY
14.1	6.21	4.6	1.35	<0.050	<5.0	3.70	0.55	230	78

TEMP	pH	ORP	DO	NITRATE	SULFATE	FERROUS IRON	DISSOLVED MANGANESE	DISSOLVED METHANE	TOTAL ALKALINITY
14.1	6.03	11.7	1.64	0.55	<5.0	8.00	0.55	460	56

TEMP	pH	ORP	DO	NITRATE	SULFATE	FERROUS IRON	DISSOLVED MANGANESE	DISSOLVED METHANE	TOTAL ALKALINITY
15.7	5.78	85.5	1.07	0.95	12	1.42	0.29	360	52

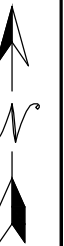
TEMP	pH	ORP	DO	NITRATE	SULFATE	FERROUS IRON	DISSOLVED MANGANESE	DISSOLVED METHANE	TOTAL ALKALINITY
14.1	6.16	184.1	4.52	2.9	12	<0.150	<0.011	<0.55	60

LEGEND

- CMW-26 CHS MONITORING WELL
- HMW-13 HILLMAN MONITORING WELL
- MONITORING WELL SAMPLED FOR SHUTDOWN EVALUATION
- ESTIMATED EXTENT OF THE CONSTITUENT OF CONCERN CONCENTRATIONS EXCEEDING CLEANUP LEVELS IN GROUNDWATER

NOTES:

- TEMPERATURE MEASURED IN DEGREES CELSIUS
- ORP MEASURED IN MILLIVOLTS
- NITRATE, SULFATE, FERROUS IRON, AND DISSOLVED MANGANESE ANALYTICAL RESULTS REPORTED IN MILLIGRAMS PER LITER.
- DISSOLVED METHANE ANALYTICAL RESULTS REPORTED IN MICROGRAMS PER LITER.
- TOTAL ALKALINITY ANALYTICAL RESULTS REPORTED IN MILLIGRAMS PER LITER AS CALCIUM CARBONATE.
- < = DENOTES ANALYTED NOT DETECTED AT OR EXCEEDING THE LABORATORY REPORTING LIMIT LISTED.
- DO = DISSOLVED OXYGEN
- ORP = OXIDATION-REDUCTION POTENTIAL



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FIGURE 6
MAY 2023 GEOCHEMICAL PARAMETERS AND DATA
ANALYTICAL RESULTS
CHS AUBURN SITE
AUBURN, WASHINGTON

FARALLON PN: 301-004

Drawn By: JJ Checked By: TM

Date: 5/23/2024 Disk Reference: 301-004

0 100

APPROXIMATE SCALE IN FEET

STATE ROUTE - 18

AUBURN WAY SOUTH

CMW-20

CMW-23

CMW-19

CMW-32

CMW-17

CMW-21

CMW-15

CMW-8

CMW-31

6th STREET SOUTHEAST

DRO	ORO	GRO	B	T	E	X
0.28	0.35	<100	<1.0	<1.0	<1.0	<2.0

DRO	ORO	GRO	B	T	E	X
0.18	0.23	<100	<1.0	<1.0	<1.0	<2.0

SCHUCKS

FIRE HOUSE SQUARE

CMW-5

HMW-9

DRO	ORO	GRO	B	T	E	X
0.35	0.50	<100	<1.0	<1.0	<1.0	<2.0

7th STREET SOUTHEAST

DRO	ORO	GRO	B	T	E	X
0.29	0.29	<100	<1.0	<1.0	<1.0	<2.0

DRO	ORO	GRO	B	T	E	X
0.49	0.41	<100	<1.0	<1.0	<1.0	<2.0

HMW-10

CMW-12

DRO	ORO	GRO	B	T	E	X
4.2	1.1	490	1.7	<1.0	<1.0	<2.0

7th STREET SOUTHEAST

DRO	ORO	GRO	B	T	E	X
1.9	0.65	810	3.0	1.3	1.1	1.1

HMW-11

CMW-27

DRO	ORO	GRO	B	T	E	X
0.68	0.37	<100	<1.0	<1.0	<1.0	<2.0

CMW-13

MCDONALD'S

CMW-6

D STREET SOUTHEAST

8th STREET SOUTHEAST

DRO	ORO	GRO	B	T	E	X
1.2	1.5	<100	<1.0	<1.0	<1.0	<2.0

WSIADA

CMW-2

CMW-10

CMW-11

DRO	ORO	GRO	B	T	E	X
1.6	0.58	<100	<1.0	<1.0	<1.0	<2.0

DRO	ORO	GRO	B	T	E	X
0.61	0.90	<100	<1.0	<1.0	<1.0	<2.0

DRO	ORO	GRO	B	T	E	X
<0.15	<0.20	<100	<1.0	<1.0	<1.0	<2.0

AS/SVE EQUIPMENT BUILDING

CMW-25

THAI RESTAURANT

CMW-28

8th STREET SOUTHEAST

DRO	ORO	GRO	B	T	E	X
0.42	0.21	<100	<1.0	<1.0	<1.0	<2.0

HMW-13

CMW-29

CMW-26

CMW-4

DRO	ORO	GRO	B	T	E	X
<0.15	<0.20	<100	<1.0	<1.0	<1.0	<2.0

CMW-3

TIRES

CHS AUBURN FACILITY

CMW-30

DRO	ORO	GRO	B	T	E	X
0.18	0.26	<100	<1.0	<1.0	<1.0	<2.0

CHS MAIN BUILDING

C STREET SOUTHEAST

CMW-24

HMW-14

LEGEND

- CMW-26 CHS MONITORING WELL
- HMW-13 HILLMAN MONITORING WELL
- MONITORING WELL SAMPLED FOR SHUTDOWN EVALUATION
- ESTIMATED EXTENT OF THE CONSTITUENT OF CONCERN CONCENTRATIONS EXCEEDING CLEANUP LEVELS IN GROUNDWATER
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

NOTES:

- ANALYTICAL UNITS FOR DRO AND ORO ARE IN MILLIGRAMS PER LITER.
- ANALYTICAL UNITS FOR GRO AND BTEX ARE IN MICROGRAMS PER LITER
- < = DENOTES ANALYTED NOT DETECTED AT OR EXCEEDING THE LABORATORY REPORTING LIMIT LISTED.
- BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT (MTCA) METHOD A CLEANUP LEVEL.
- DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- GRO = TPH AS GASOLINE-RANGE ORGANICS
- B = BENZENE E = ETHYLBENZENE
- T = TOLUENE X = XYLENES



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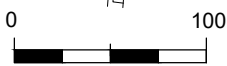
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FIGURE 7

NOVEMBER 2023 GROUNDWATER ANALYTICAL RESULTS FOR DRO, ORO, GRO, AND BTEX
CHS AUBURN SITE
AUBURN, WASHINGTON

FARALLON PN: 301-004

APPROXIMATE SCALE IN FEET



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Checked By: TM

Date: 5/23/2024

Disk Reference: 301-004

TABLES

**AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM SHUTDOWN
AND EVALUATION PLAN
CHS Auburn Site
238 8th Street Southeast
Auburn, Washington**

Farallon PN: 301-004

**Table 2
Air Analytical Data
Cenex Auburn Site
Auburn, Washington
Farallon PN: 301-004**

Sample Location	Sample Identification	Sample Methodology	Sample Date	Analytical Results (nanoliter per microliter [ppmv])				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	GRO
SVE System	EFFLUENT-052919	EPA 2021B	5/29/2019	< 0.31	< 0.26	< 0.23	< 0.46	< 21
	EFFLUENT-062419	EPA 2021B	6/24/2019	0.72	< 0.26	<0.23	< 0.46	< 21
	EFFLUENT-071819	EPA TO-15	7/18/2019	0.000181	0.000623	0.00171	0.0031	8.030 ^E
	EFFLUENT-082319	EPA TO-15	8/23/2019	0.000116	0.000610	0.00287	0.0126	0.647
	EFFLUENT-092319	EPA TO-15	9/23/2019	< 0.0000895	< 0.0004	0.00294	0.0075	36.9 ^E
	EFFLUENT-102219	EPA TO-15	10/22/2019	< 0.000895	< 0.0040	< 0.0040	< 0.016	27.0 ^E
	EFFLUENT-121819	EPA TO-15	12/18/2019	< 0.0000895	< 0.00040	< 0.00040	< 0.0016	0.205
	EFFLUENT-020420	EPA TO-15	2/4/2020	< 0.0000895	< 0.00040	< 0.00040	< 0.0016	0.026
	EFFLUENT-040120	EPA TO-15	4/1/2020	< 0.0000895	< 0.00040	< 0.00040	< 0.0016	0.011
	EFFLUENT-050720	EPA TO-15	5/7/2020	< 0.0000895	< 0.00040	< 0.00040	< 0.0016	0.007
	EFFLUENT-060220	EPA TO-15	6/2/2020	< 0.0000895	< 0.00040	< 0.00040	< 0.0016	0.057
	EFFLUENT-110620	EPA TO-15	11/6/2020	< 0.0000895	< 0.00040	< 0.00040	< 0.0016	0.385
	INFLUENT-030221	EPA TO-15	3/2/2021	< 0.000100	< 0.00100	< 0.00400	< 0.0060	< 0.04
	INFLUENT-051721	EPA TO-15	5/17/2021	< 0.0008	< 0.04	< 0.0008	0.00323	14
	EFFLUENT-061521	EPA TO-15	6/15/2021	<0.0018	<0.09	<0.0018	<0.0054	21
	EFFLUENT-082521	EPA TO-15	8/25/2021	<0.00061	<0.03	<0.00061	<0.00181	0.87
	INFLUENT-022322	EPA TO-15	2/23/2022	<0.0006	<0.03	<0.0006	0.00210	1.70
	INFLUENT-051222	EPA TO-15	5/12/2022	<0.00046	<0.023	<0.00046	<0.00138	<0.37
	INFLUENT-081022	EPA TO-15	8/10/2022	<0.0011	<0.055	<0.0011	<0.0033	3.80
	INFLUENT-101022	EPA TO-15	10/10/2022	<0.00087	<0.043	0.0012	0.0093	8.30

Table 2
Air Analytical Data
Cenex Auburn Site
Auburn, Washington
Farallon PN: 301-004

Sample Location	Sample Identification	Sample Methodology	Sample Date	Analytical Results (nanoliter per microliter [ppmv])				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	GRO
	OVERALL-121622	EPA TO-15	12/16/2022	<0.0016	<0.080	<0.0016	<0.0048	4.40
SVE System	OVERALL-031023	EPA TO-15	3/10/2023	0.0017	<0.039	<0.00078	<0.00238	0.65
	OVERALL-051123	EPA TO-15	5/11/2023	<0.00078	<0.039	<0.00078	0.00450	2.80
	OVERALL-071223	EPA TO-15	7/12/2023	<0.00082	<0.016	0.0012	0.00770	9.50
	OVERALL-092923	EPA TO-15	9/29/2023	<0.00086	<0.017	<0.00086	<0.00256	9.90
	OVERALL-111423	EPA TO-15	11/14/2023	<0.00084	<0.017	<0.00084	<0.00254	3.90
	OVERALL-011824	EPA TO-15	1/18/2024	<0.00057	<0.011	<0.00057	<0.00167	<0.46
	OVERALL-031124	EPA TO-15	3/11/2024	<0.00054	<0.011	<0.00054	0.00185	<0.43

NOTES:

< denotes analyte not detected at or exceeding the reporting limit listed.

EPA = U.S. Environmental Protection Agency

E denotes estimated analytical value, result exceeds the linear working range of the laboratory equipment GRO = total petroleum hydrocarbons as gasoline-range organics

* denotes result not within established laboratory control limits

ppmv = parts per million volume

SVE = soil vapor extraction

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
CMW-2	CMW-2-011818	1/18/2018	0.93	<0.62 ⁴	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-073118	7/31/2018	0.63	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-012219	1/22/2019	2.2	1.1 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-2-082219	8/22/2019	1.0	0.69 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-112619	11/26/2019	5.2	3.3 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-022520	2/25/2020	0.63	1.0	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-052820	5/28/2020	0.76	0.94	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-111220	11/12/2020	1.9	1.1 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-052521	5/25/2021	0.34	0.63	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-113021	11/30/2021	1.4	1.2	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-052622	5/26/2022	0.20	0.25	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-113022	11/30/2022	0.57	0.59	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-2-053123	5/31/2023	0.43	0.64	<100	<1.0	<1.0	<1.0	<2.0	
CMW-2-112823	11/28/2023	1.2	1.5	<100	<1.0	<1.0	<1.0	<2.0		
CMW-8	CMW-8-011818	1/18/2018	0.38	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-080118	8/1/2018	0.31	<0.42	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-012219	1/22/2019	0.50	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-8-082119	8/21/2019	0.51	<0.40	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-112519	11/25/2019	0.53	0.36	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-022420	2/24/2020	0.60	0.25	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-052820	5/28/2020	0.97	0.56	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-111120	11/11/2020	0.47	0.22 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-052421	5/24/2021	0.53	0.26	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-113021	11/30/2021	0.58	0.35	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-052522	5/25/2022	0.79	0.60	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-113022	11/30/2022	0.28	0.29	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-8-053123	5/31/2023	0.64	0.71	<100	<1.0	<1.0	<1.0	<2.0	
CMW-8-112823	11/28/2023	0.28	0.35	<100	<1.0	<1.0	<1.0	<2.0		
MTCNA Method A Cleanup Levels for Groundwater⁶			0.5	0.5	800	5	1,000	700	1,000	

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
CMW-10	CMW-10-011818	1/18/2018	1.4	<0.89 ⁴	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-080118	8/1/2018	1.5	0.67 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-012319	1/23/2019	2.1	1.4 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-10-082219	8/22/2019	2.9	0.80 ⁵	<400	<4.0	<4.0	<4.0	<8.0	
	CMW-10-112519	11/25/2019	0.73	0.37	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-022520	2/25/2020	2.3	1.4	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-052820	5/28/2020	3.4	2.9	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-111220	11/12/2020	1.6	0.70 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-052521	5/25/2021	2.1	3.1	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-113021	11/30/2021	2.8	2.9	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-052622	5/26/2022	0.62	0.51	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-113022	11/30/2022	1.8	0.77	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-10-053123	5/31/2023	3.0	4.5	<100	<1.0	<1.0	<1.0	<2.0	
CMW-10-112823	11/28/2023	1.6	0.58	<100	<1.0	<1.0	<1.0	<2.0		
CMW-12	CMW-12-011818	1/18/2018	2.1 ¹¹	<0.55 ⁴	1,300	3.0	<1.0	<1.0	<2.0	
	QA/QC-1-011818 ⁹	1/18/2018	2.2 ¹¹	<0.70 ⁴	1,200	2.6	<1.0	<1.0	<2.0	
	CMW-12-080118	8/1/2018	1.5 ¹¹	0.77 ⁵	1,500	1.2	<1.0	<1.0	1.6	
	QA/QC-1-080118 ⁹	8/1/2018	1.4 ¹¹	0.56 ⁵	1,500	1.1	<1.0	<1.0	1.9	
	CMW-12-012319	1/23/2019	1.6 ¹¹	0.43 ⁵	1,500 ⁸	1.7	<1.0	<1.0	<2.0	
	QA/QC-1-012319 ⁹	1/23/2019	1.6 ¹¹	<0.42	1,500 ⁸	1.6	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-12-082219	8/22/2019	2.5 ¹¹	0.51 ⁵	920	<4.0	<4.0	<4.0	<8.0	
	QA/QC-1-082219 ⁹	8/22/2019	2.1 ¹¹	<0.41	950	<4.0	<4.0	<4.0	<8.0	
	CMW-12-112619	11/26/2019	2.3 ¹¹	0.51 ⁵	620 ⁸	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-112619 ⁹	11/26/2019	2.3 ¹¹	0.46 ⁵	620 ⁸	<1.0	<1.0	<1.0	<2.0	
	CMW-12-022520	2/25/2020	4.2	1.4	1,000	2.0	1.8	<1.0	<2.0	
	QA/QC-1-022520 ⁹	2/25/2020	4.2	1.5	950	2.0	1.8	<1.0	<2.0	
	CMW-12-052820	5/28/2020	2.4 ¹¹	1.1	510 ⁸	<1.0	<1.0	<1.0	<2.0	
	QA/QC-2-052820 ⁹	5/28/2020	2.3 ¹¹	1.1	490 ⁸	<1.0	<1.0	<1.0	<2.0	
	CMW-12-111220	11/12/2020	0.85 ¹¹	0.34 ⁵	200 ⁸	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-111220 ⁹	11/12/2020	0.90 ¹¹	0.37 ⁵	200 ⁸	<1.0	<1.0	<1.0	<2.0	
	CMW-12-052521	5/25/2021	1.1	0.95	<130 ⁴	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-052521 ⁹	5/25/2021	1.0	0.98	<120 ⁴	<1.0	<1.0	<1.0	<2.0	
	CMW-12-113021	11/30/2021	0.64	0.33	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-113021 ⁹	11/30/2021	0.65	0.32	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-12-052622	5/26/2022	0.80	0.44	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-2-052622 ⁹	5/26/2022	0.84	0.49	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-12-113022	11/30/2022	0.43	0.26	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-113022 ⁹	11/30/2022	0.39	0.30	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-12-053123	5/31/2023	1.0	1.1	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-053123 ⁹	5/31/2023	0.88	0.89	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-12-112723	11/27/2023	0.29	0.29	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-112723 ⁹	11/27/2023	0.32	0.36	<100	<1.0	<1.0	<1.0	<2.0	
	MTCA Method A Cleanup Levels for Groundwater⁶			0.5	0.5	800	5	1,000	700	1,000

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
CMW-13	CMW-13-011818	1/18/2018	0.29	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-073118	7/31/2018	0.62 ¹¹	<0.41	240	1.1	<1.0	<1.0	<2.0	
	CMW-13-012319	1/23/2019	0.57	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-13-082219	8/22/2019	0.38	<0.41	<400	<4.0	<4.0	<4.0	<8.0	
	CMW-13-112619	11/26/2019	0.70	0.35 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-022520	2/25/2020	3.3	2.0	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-052820	5/28/2020	1.7	1.1	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-111220	11/12/2020	0.48	0.25 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-052421	5/24/2021	1.4	0.72	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-113021	11/30/2021	0.57	0.34	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-052522	5/25/2022	1.4	0.67	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-13-113022	11/30/2022	0.44 ¹¹	0.22	150	1.5	<1.0	<1.0	<2.0	
CMW-13-053123	5/31/2023	1.5	1.2	<100	<1.0	<1.0	<1.0	<2.0		
CMW-13-112723	11/27/2023	0.68	0.37	<100	<1.0	<1.0	<1.0	<2.0		
CMW-25	CMW-25-011818	1/18/2018	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-073118	7/31/2018	<0.26	<0.42	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-012219	1/22/2019	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-25-082119	8/21/2019	<0.25	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-112519	11/25/2019	0.14	0.22	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-022420	2/24/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-052720	5/27/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-111220	11/12/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-052421	5/24/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-112921	11/29/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-052522	5/25/2022	<0.11	<0.22	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-25-113022	11/30/2022	<0.13	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
CMW-25-053023	5/30/2023	<0.21	<0.15	<400	<4.0	<4.0	<4.0	<8.0		
CMW-25-112823	11/28/2023	<0.15	<0.20	<100	<1.0	<1.0	<1.0	<2.0		
CMW-26	CMW-26-011818	1/18/2018	<0.26	<0.42	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-080118	8/1/2018	<0.26	<0.42	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-012219	1/22/2019	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-26-082119	8/21/2019	<0.25	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-112619	11/26/2019	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-022520	2/25/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-052720	5/27/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-111120	11/11/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-052521	5/25/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-112921	11/29/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-052522	5/25/2022	<0.11	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-26-113022	11/30/2022	<0.13	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
CMW-26-053023	5/30/2023	<0.21	<0.15	<400	<4.0	<4.0	<4.0	<8.0		
CMW-26-112723	11/27/2023	<0.15	<0.20	<100	<1.0	<1.0	<1.0	<2.0		
MTCA Method A Cleanup Levels for Groundwater*			0.5	0.5	800	5	1,000	700	1,000	

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
CMW-27	CMW-27-011818	1/18/2018	1.7	<1.0 ⁴	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-2-011818 ⁹	1/18/2018	1.6	<0.96 ⁴	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-27-080118	8/1/2018	2.7 ¹¹	1.0 ⁵	1,000	<1.0	1.3	5.9	7.4	
	QA/QC-2-080118 ⁹	8/1/2018	2.6 ¹¹	0.89 ⁵	1,100	<1.0	1.3	5.8	7.8	
	CMW-27-012319	1/23/2019	6.9 ¹¹	1.6 ⁵	900 ⁸	1.5	3.4	19	17	
	QA/QC-2-012319 ⁹	1/23/2019	6.9 ¹¹	1.5 ⁵	940 ⁸	1.3	3.3	20	17	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-27-082219	8/22/2019	2.7 ¹¹	0.56 ⁵	1,500	1.2	<1.0	5.2	7.9	
	QA/QC-2-082219 ⁹	8/22/2019	3.4 ¹¹	0.82 ⁵	1,300	<4.0	<4.0	4.9	5.9	
	CMW-27-112619	11/26/2019	3.3 ¹¹	0.94 ⁵	860 ⁸	<1.0	1.2	<1.0	2.0	
	QA/QC-2-112619 ⁹	11/26/2019	3.9 ¹¹	1.1 ⁵	940 ⁸	<1.0	1.6	1.3	2.5	
	CMW-27-022520	2/25/2020	1.2	1.2	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-2-022520 ⁹	2/25/2020	1.0	1.1	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-27-052820	5/28/2020	3.5 ¹¹	2.0	1,300 ⁸	<1.0	3.4	16	4.1	
	QA/QC-1-052820 ⁹	5/28/2020	4.5 ¹¹	2.4	1,000 ⁸	<1.0	2.6	13	3.6	
	CMW-27-111220	11/12/2020	2.1 ¹¹	0.70 ⁵	1,700 ⁸	<1.0	<1.0	1.8	3.9	
	QA/QC-2-111220 ⁹	11/12/2020	2.4 ¹¹	0.76 ⁵	1,800 ⁸	<1.0	<1.0	1.8	4.0	
	CMW-27-052521	5/25/2021	3.1 ¹¹	1.4	1,100 ⁸	<1.0	<1.0	15	3.5	
	QA/QC-2-052521 ⁹	5/25/2021	3.1 ¹¹	2.3	1,200 ⁸	3.9	<1.0	15	3.4	
	CMW-27-113021	11/30/2021	8.9 ¹¹	4.8	770	<1.0	<1.0	5.0	1.7	
	QA/QC-2-113021 ⁹	11/30/2021	6.7 ¹¹	2.8	960	1.2	<1.0	6.5	2.1	
	CMW-27-052622	5/26/2022	1.6	1.0	<100	<1.0	<1.0	<1.0	<2.0	
	QA/QC-1-052622 ⁹	5/26/2022	1.6	1.1	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-27-113022	11/30/2022	2.1 ¹¹	0.61	1,300	3.8	<1.0	3.2	1.5	
	QA/QC-2-113022 ⁹	11/30/2022	1.7 ¹¹	0.61	1,300	4.0	<1.0	3.3	1.5	
	CMW-27-053123	5/31/2023	2.5	3.0	710	1.2	<1.0	1.7	<2.0	
QA/QC-2-053123 ⁹	5/31/2023	2.9	4.2	680	1.5	<1.0	2.0	1.1		
CMW-27-112823	11/28/2023	1.9 ¹¹	0.65	810	3.0	1.3	1.1	1.1		
QA/QC-2-112823 ⁹	11/28/2023	2.7 ¹¹	0.62	840	3.5	1.3	1.1	1.1		
CMW-28	CMW-28-011818	1/18/2018	<0.26	<0.42	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-080118	8/1/2018	0.81	0.52 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-012319	1/23/2019	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-28-082119	8/21/2019	0.63	<0.44	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-112619	11/26/2019	2.8	1.9 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-022420	2/24/2020	0.45	0.32	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-052720	5/27/2020	<0.21	0.23	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-111220	11/12/2020	0.70	0.42 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-052521	5/25/2021	0.49	0.43	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-113021	11/30/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-052522	5/25/2022	1.1	0.68	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-112922	11/29/2022	0.24	0.31	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-053023	5/30/2023	1.5	1.1	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-28-112723	11/27/2023	0.61	0.90	<100	<1.0	<1.0	<1.0	<2.0	
MTCNA Method A Cleanup Levels for Groundwater⁶			0.5	0.5	800	5	1,000	700	1,000	

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
CMW-29	CMW-29-011718	1/17/2018	0.70	<0.54 ⁴	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-073118	7/31/2018	0.33	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-012219	1/22/2019	1.0	0.50 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	CMW-29-082219	8/22/2019	<0.25	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-112519	11/25/2019	0.55	0.38	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-022420	2/24/2020	0.67	0.28	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-052720	5/27/2020	0.97	0.71	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-111120	11/11/2020	0.25	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-052421	5/24/2021	0.71	0.43	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-112921	11/29/2021	0.74	0.87	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-052522	5/25/2022	0.74	0.56	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-29-113022	11/30/2022	0.17	0.20	<100	<1.0	<1.0	<1.0	<2.0	
CMW-29-053023	5/30/2023	0.48	0.46	<100	<1.0	<1.0	<1.0	<2.0		
CMW-29-112723	11/27/2023	<0.15	<0.20	<100	<1.0	<1.0	<1.0	<2.0		
CMW-30-012219	1/22/2019	0.26	<0.42	<100	<1.0	<1.0	<1.0	<2.0		
Startup of Current AS/SVE System June 13, 2019										
CMW-30	CMW-30-082119	8/21/2019	<0.25	<0.40	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-112519	11/25/2019	0.19	0.22	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-022520	2/25/2020	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-052720	5/27/2020	0.36	0.30	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-111120	11/11/2020	0.22	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-052421	5/24/2021	0.29	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-112921	11/29/2021	0.23	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-052522	5/25/2022	0.40	0.29	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-112922	11/29/2022	0.47	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-053023	5/30/2023	0.33	0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-30-112723	11/27/2023	0.18	0.26	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-011818	1/18/2018	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-073118	7/31/2018	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
CMW-31-012219	1/22/2019	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0		
Startup of Current AS/SVE System June 13, 2019										
CMW-31	CMW-31-082219	8/22/2019	0.34	<0.45	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-112519	11/25/2019	0.22	0.27	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-022420	2/24/2020	<0.21	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-052820	5/28/2020	<0.21	0.32	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-111120	11/11/2020	0.29	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-052421	5/24/2021	<0.20	0.27	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-112921	11/29/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-052522	5/25/2022	<0.10	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-112922	11/29/2022	0.25	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-053123	5/31/2023	<0.21	0.27	<100	<1.0	<1.0	<1.0	<2.0	
	CMW-31-112823	11/28/2023	0.18	0.23	<100	<1.0	<1.0	<1.0	<2.0	
	MTCA Method A Cleanup Levels for Groundwater⁶			0.5	0.5	800	5	1,000	700	1,000

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
HMW-9	HMW-9-011818	1/18/2018	0.35	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-080118	8/1/2018	0.46	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-012219	1/22/2019	0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	HMW-9-082119	8/21/2019	0.34	<0.44	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-112519	11/25/2019	0.40	0.42	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-022520	2/25/2020	0.39	1.2	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-052820	5/28/2020	0.98	2.1	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-111120	11/11/2020	0.47	0.69	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-052521	5/25/2021	0.55	1.2	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-113021	11/30/2021	0.30	0.32	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-052622	5/26/2022	0.77	0.65	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-9-113022	11/30/2022	0.18	0.45	<100	<1.0	<1.0	<1.0	<2.0	
HMW-09-053123	5/31/2023	0.96	1.3	<100	<1.0	<1.0	<1.0	<2.0		
HMW-9-112723	11/27/2023	0.35	0.50	<100	<1.0	<1.0	<1.0	<2.0		
HMW-10	HMW-10-011718	1/17/2018	0.72	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-073118	7/31/2018	0.60 ¹¹	<0.40	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-012219	1/22/2019	0.38	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	HMW-10-082119	8/21/2019	0.51	<0.41	<400	<4.0	<4.0	<4.0	<8.0	
	HMW-10-112519	11/25/2019	5.0	1.7 ⁵	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-022420	2/24/2020	0.71	0.34	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-052820	5/28/2020	1.2	0.77	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-111220	11/12/2020	0.50	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-052421	5/24/2021	0.95	0.51	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-113021	11/30/2021	0.50	0.23	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-052622	5/26/2022	1.5	0.75	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-10-113022	11/30/2022	0.52	0.28	<100	<1.0	<1.0	<1.0	<2.0	
HMW-10-053123	5/31/2023	1.0	0.75	<100	<1.0	<1.0	<1.0	<2.0		
HMW-10-112823	11/28/2023	0.49	0.41	<100	<1.0	<1.0	<1.0	<2.0		
HMW-11	HMW-11-011818	1/18/2018	2.5	< 1.3 ⁴	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-11-080118	8/1/2018	1.6 ¹¹	0.48 ⁵	1,600	1.0	<1.0	<1.0	<2.0	
	HMW-11-012319	1/23/2019	1.9 ¹¹	<0.41	1,900 ⁸	1.4	<1.0	1.2	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	HMW-11-082219	8/22/2019	3.3 ¹¹	0.49 ⁵	1,400	<4.0	<4.0	<4.0	<8.0	
	HMW-11-112619	11/26/2019	3.2 ¹¹	0.63 ⁵	1,200 ⁸	1.0	1.0	<1.0	<2.0	
	HMW-11-022520	2/25/2020	4.9	2.1	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-11-052820	5/28/2020	4.1 ¹¹	2.1	920 ⁸	<1.0	1.5	<1.0	<2.0	
	HMW-11-111220	11/12/2020	1.4 ¹¹	0.51 ⁵	410 ⁸	<1.0	<1.0	<1.0	<2.0	
	HMW-11-052521	5/25/2021	3.5 ¹¹	1.1	730 ⁸	<1.0	<1.0	<1.0	<2.0	
	HMW-11-113021	11/30/2021	0.36	0.38	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-11-052622	5/26/2022	2.5	1.4	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-11-113022	11/30/2022	1.3 ¹¹	0.51	480	2.1	<1.0	<1.0	<2.0	
HMW-11-053123	5/31/2023	3.5	2.5	770	1.7	<1.0	<1.0	<2.0		
HMW-11-112823	11/28/2023	4.2 ¹¹	1.1	490	1.7	<1.0	<1.0	<2.0		
MTCA Method A Cleanup Levels for Groundwater ⁵			0.5	0.5	800	5	1,000	700	1,000	

Table 3
Summary of Laboratory Analytical Results for TPH and BTEX in Groundwater –
January 2018 through November 2023
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

Well Identification	Sample Identification	Sample Date	Analytical Results (milligrams per liter)		Analytical Results (micrograms per liter)					
			DRO ¹	ORO ¹	GRO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³	
HMW-13	HMW-13-011818	1/18/2018	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-080118	8/1/2018	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-012319	1/23/2019	<0.26	<0.41	<100	<1.0	<1.0	<1.0	<2.0	
	Startup of Current AS/SVE System June 13, 2019									
	HMW-13-082119	8/21/2019	<0.30	<0.48	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-112619	11/26/2019	0.27	<0.21	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-022420	2/24/2020	<0.21	0.22	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-052720	5/27/2020	<0.21	0.24	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-111120	11/11/2020	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-052521	5/25/2021	<0.20	0.24	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-113021	11/30/2021	<0.20	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-052622	5/26/2022	<0.11	<0.22	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-113022	11/30/2022	<0.13	<0.20	<100	<1.0	<1.0	<1.0	<2.0	
	HMW-13-053023	5/30/2023	<0.22	<0.17	<100	<1.0	<1.0	<1.0	<2.0	
HMW-13-112723	11/27/2023	0.42	0.21	<100	<1.0	<1.0	<1.0	<2.0		
MTCA Method A Cleanup Levels for Groundwater⁶			0.5	0.5	800	5	1,000	700	1,000	

NOTES:

<denotes analyte not detected at or exceeding the laboratory reporting limit listed.

Results in **bold** denote sample result or reporting limit exceeds applicable MTCA Method A cleanup levels for groundwater.

Blue shading indicates monitoring well to be included in shutdown evaluation sampling.

¹Analyzed by Northwest Method NWTPH-Dx. Samples analyzed by OnSite Environmental Inc. between June 2008 and November 2016 were analyzed using acid silica gel cleanup procedure.

²Analyzed by Northwest Method NWTPH-Gx.

³Analyzed by U.S. Environmental Protection Agency Method 8021B.

⁴The practical quantitation limit is elevated due to interferences in the sample.

⁵Hydrocarbons in the diesel range are impacting the oil-range result.

⁶MTCA Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

⁷Sample collected using a disposable bailer.

⁸Hydrocarbons indicative of heavier fuels present in the sample are impacting the gasoline result.

⁹Quality assurance/quality control field duplicate sample.

¹⁰Duplicate sample analyzed at TestAmerica Laboratories Inc.

¹¹Hydrocarbons in the gasoline-range are impacting the diesel-range result.

AS/SVE = air sparge/soil vapor extraction

BTEX = benzene, toluene, ethylbenzene, and xylenes

DRO = TPH as diesel-range organics

GRO = TPH as gasoline-range organics

MTCA = Washington State Model Toxics Control Act Cleanup Regulation

ORO = TPH as oil-range organics

TPH = total petroleum hydrocarbons

CHART

**AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM SHUTDOWN
AND EVALUATION PLAN
CHS Auburn Site
238 8th Street Southeast
Auburn, Washington**

Farallon PN: 301-004

Chart 1
Cumulative Pounds of Benzene and GRO Removed
CHS Auburn Site
Auburn, Washington
Farallon PN: 301-004

