

## **TABLES**

Table 1  
Vinyl Chloride Results from Groundwater Wells 2012-2018

Date Sampled	CG-1	CG-2	CG-3	CG-4	HEX-1	HEX-2	HEX-3	HEX-4	HEX-5	HEX-6	HEX-7	HEX-8	HEX-9	HEX-10	HEX-11	HEX-12	HEX-13	HEX-14	HEX-15	HY-9	Ki	Ks	PS-1	HY-7S	HY-7SS	
Jan-12					9.8	2	3.3																			
Feb-12					3.4	1.2	2.5																			
Mar-12					1.7	0.48	2.3																			
Apr-12	0.09	ND	0.72	28	22	2.9	3.2	49	0.27	1.5	19	130	0.27	ND	19	0.2	0.41	ND	ND	0.22	0.16	ND				
May-12					21	0.098	2.9																			
Oct-12	0.09 J	ND	2.6	49	2.8	50	0.9 J	0.67	ND	37	8.6	99	0.330 J	ND	ND	7.5	ND			0.180 J	ND	ND				
Apr-13	0.150 J	0.09 J	4.7	72	1	2.8	1.9	0.73	0.180 J	9.5	40	250	0.49	ND	< 0.0750	11	0.08 J	ND	ND	0.2 J	0.120 J	0.220 J				
Oct-13	0.130 J	ND	0.73	63	0.4 J	2.7	0.87	0.68	0.170 J	5.2	52	350	0.410 J	ND	ND	5.9	ND	ND	ND	1.2	0.54	0.08 J				
May-14	0.11	0.09 J																								
Jun-14	0.08 J	0.08 J																								
Jul-14	0.08 J	ND																								
Aug-14	0.170 J	0.08 J																								
Sep-14	0.23	0.27	0.21	51	0.13	4.5	0.91	0.51	0.21	16	7.4	290	0.66	0.27	ND	ND	ND	ND	ND	0.19	ND	ND				
Sep-15	ND	ND	0.11	32	0.39	2.8	1.5	0.43	0.18	7.3	5	290	0.47	0.32	0.14	0.14	ND	ND	ND	0.08 J	ND	ND				
Oct-15				30								310												79		
Nov-15				26								270												33		
Dec-15				30								160												31		
Jan-16				45								220												37		
Feb-16				42								290												20		
Mar-16				46								240												18		
Apr-16				30								420												150		
May-16												380												170		
Jun-16												320												160		
Jul-16				17								240												130		
Sep-16	ND	ND	0.11	15	0.14	1.9	0.87	0.35	0.18	2.4	6.1	190	0.36	0.53	ND	0.62	ND	ND	ND	0.09 J	ND	0.08 J				
Oct-16				12								240												86		
Mar-17	< 0.10	< 0.10	0.080 J	20	0.19					0.41	36	210									0.11	0.11	< 0.10	69		
May-17	< 0.10	< 0.10	< 0.10	0.8	0.14					0.38	14	160									0.17	0.26	< 0.10	76		
Sep-17	0.038	0.017	0.028	0.062J	0.11	1	0.88	0.38	0.24	1.4	1.9	1.3	0.41	0.36	< 0.10	1.4	0.089	< 0.10	< 0.10	0.16	0.14	0.13	26			
Dec-17	< 0.075	< 0.075	< 0.075	< 0.075	< 0.075					0.34	7.6	73								< 0.075	0.15	0.15	3			
Mar-18	< 0.075	< 0.075	< 0.075	1.8	0.10					0.30	14	26									0.11	0.090 J	< 0.075	< 0.075		
Jun-18	< 0.075	< 0.075	< 0.075	0.17J	0.090J					0.39	2.2	20									< 0.075	< 0.075	< 0.075	< 0.075	0.11J	0.19J

Notes  
MCTA Cleanup Standard for VC = 0.2 µg/L  
Results are in units of micrograms per liter (µg/L)  
MCTA = Model Toxics Control Act  
ND = Non Detect  
< = Result is less than the given Reporting Limit (RL) value  
NA = Not Sampled/Not Applicable  
**Bold** = Result exceeded the MCTA Regulatory Limits  
J = Result was reported as below the reporting limit but above the detection limit, and therefore is estimated.

**Table 2**  
**Applicable, Relevant and Appropriate Requirements (ARARs)**  
**Hexcel Plant 1, Kent, Washington**

Action	Citation	Requirements	Comments
Construction	29 CFR Part 1910.120 Occupational Safety and Health Standards - Hazardous Waste Operations and Emergency Response	Federal regulation requiring that remedial activities must be in accordance with applicable Occupational Safety and Health Administration (OSHA) requirements.	Applicable to construction phase of remedial alternatives.
	29 CFR Part 1926 Safety and Health Regulations for Construction	Federal regulation requiring that remedial construction activities must be in accordance with applicable OSHA requirements.	Applicable to construction phase of remedial alternatives.
	King County Title 20	County regulations covering construction and infrastructure regulations.	Applicable to construction of treatment system alternatives.
Treatment	42 USC 6902 (RCRA)	Defines Hazardous waste management requirements.	Applies to management of hazardous/dangerous waste. If wastes are accumulated in treatment system they will be managed in accordance with these requirements.
	RCW 70.105D.090 (Model Toxics Control Act)	Defines hazardous waste cleanup policies.	Remedial activities will comply with substantive requirements of ARARS.
	WAC 173-340 (MTCA regulations)	Establishes administrative processes and standards to identify, investigate and clean up facilities where hazardous substances have come to be located.	Applies to any facility where hazardous substance releases to the environment have been confirmed.
	State Hazardous Waste Management Act (HWMA) RCW 70.105	Defines threshold levels and criteria to determine whether materials are hazardous/dangerous waste.	Applies to designation, handling, and disposal of wastes. Treatment system wastes meeting these criteria will be handled and disposed of in accordance with regulatory requirements.
Extraction wells	Well Construction RCW 18.104 WAC 173-160	Requirements that apply to wells and well construction.	Applies to construction of extraction wells for pump and treat alternative.
Transportation	40 CFR 261, 262, 264; 49 CFR 171, 172, 173, 174 Hazardous Materials Transportation	Defines requirements for off-site transportation of wastes.	Applicable to transportation of waste off-site. Applies to treatment alternative. Actions will comply with these requirements.
	WAC 446-50 Transportation of hazardous/dangerous waste	Defines requirements for off-site transportation of wastes.	Applicable to transportation of waste off-site. Applies to treatment alternative. Actions will comply with these requirements.

**Table 3  
Potential Groundwater Cleanup Levels for Vinyl Chloride  
Hexcel Plant 1, Kent Washington**

Analyte	Groundwater Protection (µg/L)		Concentration Protective of Surface Water (µg/L)									
	Federal & State MCL	MTCA Method A	National Toxics Rule (1)				National Recommended Water Quality Criteria			MTCA Method B		
			Protection of Aquatic Life - Freshwater		Protection of Human Health (Water & Organisms) (4)	Protection of Human Health (Organisms Only)	Protection of Aquatic Life - Freshwater		Protection of Human Health (Water & Organisms) (4)	Protection of Human Health (Organisms Only)	Carcinogen	Non-Carcinogen
Acute	Chronic	Acute	Chronic									
Vinyl Chloride	2.0	0.20	--	--	0.025	2.4	--	--	0.025	2.4	3.7	24.0

Notes:

- (1) Ambient water quality criteria for protection of human health from 40 CFR Part 131d (National Toxics Rule, 2008)
- (2) National Recommended Water Quality Criteria (Clean Water Act Section 304, 2006)
- (3) Ambient water quality criteria for protection of aquatic life from WAC 173-201A-240
- (4) Criterion is not applicable because surface water near and directly downgradient of the Site is not and will not likely be used for drinking water

0.20 Most stringent applicable cleanup level

**Table 4**  
**Disproportionate Cost Analysis**  
**Hexcel Plant 1, Kent, Washington**

Criteria	Alternatives			
	Groundwater Extraction	EISB	MNA + EISB Contingency	MNA
<b>MTCA Threshold Criteria</b>				
1. Protection of Human Health and the Environment	Yes	Yes	Yes	Yes
2. Compliance with Cleanup Standards	Yes	Yes	Yes	Yes
3. Compliance with ARARs	Yes	Yes	Yes	Yes
4. Provision for Compliance Monitoring	Yes	Yes	Yes	Yes
Restoration Time Frame	~13-14 Years	~4 Years	~4 Years	~4-7 Years
<b>Unweighted Ratings (1 = Least Favorable; 5 = Most Favorable)</b>				
Protectiveness	4	4	5	5
Permanence	4	4	4	3
Long-Term Effectiveness	4	5	5	5
Management of Short-Term Risks	4	3	5	5
Implementability	4	3	5	5
Consideration of Public Concerns	3	3	5	5
<b>Estimated Benefit - Weighted Ratings</b>				
Protectiveness (30%)	1.2	1.2	1.5	1.5
Permanence (20%)	0.8	0.8	0.8	0.6
Long-Term Effectiveness (20%)	0.8	1	1	1
Management of Short-Term Risks (10%)	0.4	0.3	0.5	0.5
Implementability (10%)	0.4	0.3	0.5	0.5
Consideration of Public Concerns (10%)	0.3	0.3	0.5	0.5
<b>Benefit Rating</b>	3.9	3.9	4.8	4.6
<b>Disproportionate Cost Analysis</b>				
Estimated Cost	~\$200,000/yr \$2,600,000 for 13 years	~\$350,000 \$550,000 for 4 years	~\$50,000/yr + ~\$150,000 EISB \$350,000 for 4 years	~\$50,000/yr \$200,000 for 4 years
Cost Disproportionate to Incremental Benefits?	Yes	Yes	No	N/A (Baseline)
<b>Overall Alternative Ranking</b>	3	4	1	2
<b>Cost Increase over Baseline (%)</b>	1300%	275%	175%	