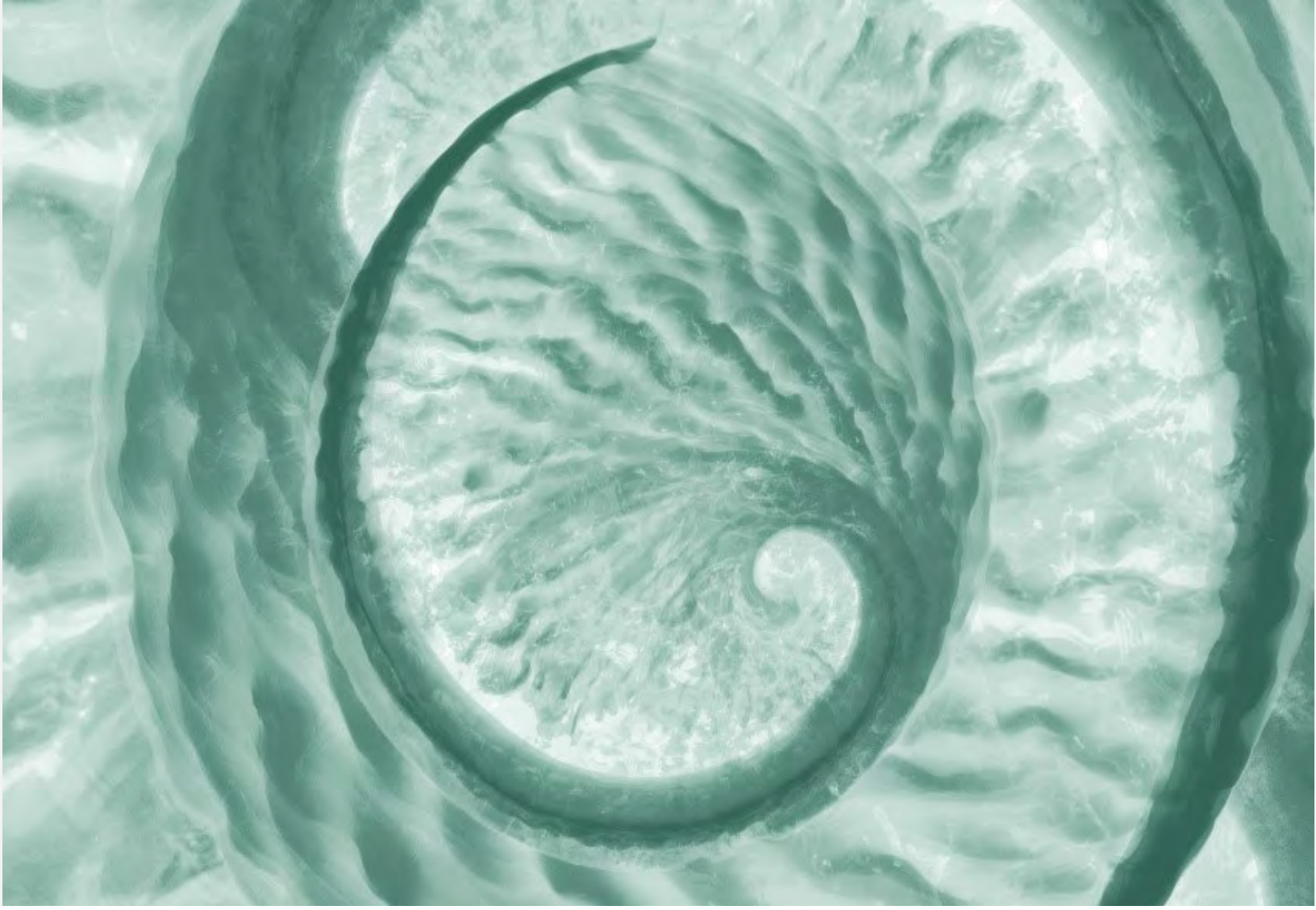

FFP Project 101, LLC

Draft Cleanup Action Plan

Goldendale Energy Storage Project, FERC No. 14861

24 November 2021

Project No.: 0588595

The business of sustainability

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Signature Page

24 November 2021

Draft Cleanup Action Plan

Goldendale Energy Storage Project, FERC No. 14861

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Acronyms and Abbreviations

Name	Description
AOC	area of concern
Applicant	FFP Project 101, LLC
CAP	Cleanup Action Plan
CAP Area	CGA Smelter Site environmental impacts addressed by this CAP
DCAP	Draft Cleanup Action Plan
CGA	Columbia Gorge Aluminum
CGA Smelter Site	Former Columbia Gorge Aluminum site in its entirety
COC	contaminant/chemical of concern
CUL	cleanup levels
Ecology	Washington State Department of Ecology
Order	Agreed Order No. DE 10483
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERM	ERM-West, Inc.
FERC	Federal Energy Regulatory Commission
FS	Feasibility Study
LMCO	Lockheed Martin Corporation
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NPDES	National Pollutant Discharge Elimination System
NSC	NSC Smelter, LLC
PGG	Plateau Geoscience Group, LLC
POC	Point of Compliance
PLPs	potentially liable persons
Smelter PLPs	potentially liable persons for the CGA Smelter Site (LMCO and NSC)
PPCD	prospective purchaser consent decree
Project	Goldendale Energy Storage Project
Project Area	area of the site to be developed for the Project
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RI/FS	Remedial Investigation / Feasibility Study
SWMU	solid waste management unit
WAC	Washington Administrative Code
WSI	West Surface Impoundment

EXECUTIVE SUMMARY

This is the Draft Cleanup Action Plan (DCAP) for the Goldendale Energy Storage Project (Project) near Goldendale, Washington. The Washington State Department of Ecology (Ecology) will use this DCAP in collaboration with FFP 101, LLC (the Applicant) to develop the final Cleanup Action Plan (CAP) for the Project. This DCAP meets the requirements of the Model Toxics Control Cleanup Act (MTCA) administered by Ecology under Chapter 173-340-380 of the Washington Administrative Code (WAC).

The Project is a proposed closed-loop, pumped-storage energy generation facility currently in a permitting process administered by the Federal Energy Regulatory Commission. The Applicant holds an option to purchase 652 acres (the "Project Area") on the western side of the former Columbia Gorge Aluminum (CGA) Plant property (the "CGA Smelter Site"). The Project will be constructed on a 529.6-acre tract of land currently owned by NSC Smelter, LLC (NSC; the "Property Boundary")). A portion of the Project (i.e., the Lower Reservoir) will be constructed over environmental impacts associated with the CGA Smelter Site including solid waste management unit (SWMU 4) and impacted groundwater (the "CAP Area").

NSC and Lockheed Martin Corporation (LMCO), collectively the CGA Smelter Site potentially liable persons (Smelter PLPs), are conducting investigation and cleanup under Agreed Order No. DE 10483 (the "Order") and pursuant to Chapter 70.105D Revised Code of Washington (RCW), MTCA.

This DCAP describes the proposed cleanup action for the Project Area, and establishes the cleanup requirements. Ecology will make a preliminary determination that a cleanup conducted in conformance with this DCAP will comply with the requirements for selection of a remedy under WAC 173-340-360.

The proposed location of a key Project feature (i.e., the Lower Reservoir) overlaps SMWU 4, a closed landfill (referred to as the West Surface Impoundment [WSI]) formerly operated by CGA Smelter Site. The WSI was closed in 2004 in accordance with applicable regulatory criteria under review and approval of Ecology with concurrence of the U.S. Environmental Protection Agency Resource Conservation and Recovery Act program. The closed WSI will not provide a geotechnically stable foundation for the Lower Reservoir. The WSI must be removed to construct the Project.

The Smelter PLPs installed groundwater monitoring wells in the area of the WSI as a condition of its closure. The Applicant will decommission wells within the Project footprint and replace certain monitoring wells as necessary for Smelter PLPs to continue monitoring groundwater quality in accordance with the Order.

A feasibility study assessed cleanup action alternatives to remove the WSI as necessary to construct the Lower Reservoir. The selected actions for the WSI in the CAP Area consist of excavation of the WSI wastes and associated impacted soil and off-site disposal of the materials at an appropriate landfill. The Smelter PLPs are conducting a feasibility study and cleanup actions for groundwater. The Applicant will decommission and replace monitoring wells as necessary to construct the Project and monitor groundwater near the WSI. The Applicant will record a covenant on the CAP Area to control use and potential exposure to impacted groundwater.

1. INTRODUCTION

The Goldendale Energy Storage Project (Project) is a proposed closed-loop, pumped-storage energy generation facility currently in the licensing process administered by the Federal Energy Regulatory Commission (FERC). FFP Project 101, LLC (the Applicant) holds an option to purchase 652 acres (the "Project Area") on the western side of the approximately 7,000-acre former Columbia Gorge Aluminum (CGA) Plant property (the "CGA Smelter Site") near Goldendale, Klickitat County, Washington to develop the Project (see Figure 1). The Project will be constructed on a 529.6-acre tract of land currently owned by NSC Smelter, LLC (NSC; the "Property Boundary"). A portion of the Project (i.e., the Lower Reservoir) will be constructed over environmental impacts associated with the CGA Smelter Site including solid waste management unit (SWMU 4) and impacted groundwater (the "Cleanup Action Plan [CAP] Area"; see Figure 2).

The CGA Smelter Site is a RCRA Corrective Action site being managed by the Washington State Department of Ecology (Ecology) as an active cleanup site under Agreed Order No. DE 10483 (Order) with Lockheed Martin Corporation (LMCO) and the current owner, NSC Smelter, LLC (NSC). LMCO and NSC, collectively the potentially liable persons (Smelter PLPs), are conducting investigation and cleanup under the Order and pursuant to Chapter 70.105D Revised Code of Washington (RCW), Model Toxics Control Act (MTCA).

The CAP Area includes CGA Smelter Site SWMU 4, a landfill designated the West Surface Impoundment (WSI) that historically received non-hazardous, non-dangerous waste. The WSI was closed in 2004 under the Resource Conservation and Recovery Act (RCRA) and is currently in a long-term monitoring program required by Ecology as a condition of the closure. The WSI (also known as SWMU 4) consists of an engineered liner system, the contents of the WSI, and an approved RCRA-engineered cover system. The Project area includes the WSI and groundwater monitoring wells owned by the Smelter PLPs to monitor groundwater impact attributable to other historical CGA Smelter operations.

Figure 2 shows the Property Boundary, including the closed WSI, groundwater monitoring wells owned by the Smelter PLPs, and the approximate extent of impacted groundwater located within the CAP Area. The closed WSI will not provide a geotechnically stable foundation for the Lower Reservoir. The WSI must be removed to construct the Project.

This is the Draft Cleanup Action Plan (DCAP) for the Project Area. Ecology will use this DCAP in collaboration with the Applicant to develop the final CAP for the Project.

1.1 Purpose

This DCAP follows Ecology's Toxics Cleanup Program Cleanup Action Plan Checklist Publication 16-09-008. Figure 1 shows the general location and layout of the Project and Project Area. A DCAP is required as part of the cleanup process under Chapter 173-340-380 WAC, MTCA Cleanup Regulations. The purpose of the DCAP is to identify the proposed cleanup action for the Project and to provide explanation for public review.

More specifically, this plan:

- Describes the impacted areas at the Project.
- Summarizes current site conditions.
- Summarizes the cleanup action alternatives considered in the remedy selection process.
- Describes the selected cleanup action for the Project and the rationale for selecting the alternative(s).

- Identifies the site-specific cleanup levels and points of compliance for each hazardous substances and media of concern for the proposed cleanup action.
- Identifies applicable state and federal laws for the proposed cleanup action.
- Discusses compliance monitoring requirement.
- Proposes a schedule to implement the CAP.

The DCAP supports Ecology's determination that a cleanup conducted in conformance with this DCAP will comply with the requirements for selection of a remedy under WAC 173-340-360.

1.2 Previous Studies

The Order requires the Smelter PLPs (NSC and LMCO) to perform a remedial investigation (RI) and a feasibility study (FS) on the CGA Smelter Site, which includes the CAP Area. Previous investigations describe the nature and extent of contamination on the CGA Smelter Site. Reports that provide background information on the CGA Smelter Site and CAP Area pertinent to this DCAP include the following.

- *Draft Risk Assessment Problem Formulation*, Plateau Geoscience Group LLC (PGG), May 2014
- *Columbia Gorge Aluminum Smelter Site Final Remedial Investigation Work Plan Volumes 1 & 2*, Tetra Tech, Inc., (Tetra Tech), August 2015
- *Columbia Gorge Aluminum Smelter Site 2017 Groundwater Monitoring Report West Surface Impoundment*, Tetra Tech, September 2017
- *Draft Remedial Investigation Report,* Tetra Tech, January 2019
- *Columbia Gorge Aluminum Smelter Site Final Work Plan Addendum,* Tetra Tech, September 2020
- *Prospective Purchaser Agreement – Detailed Proposal,* ERM, August 2021
- *Remedial Investigation/Feasibility Study Report* for the Project Area, ERM, November 2021 (concurrent with this DCAP)

Tetra Tech is scheduled to complete an addendum to the 2019 CGA Smelter Site Draft RI on behalf of the Smelter PLPs in November 2021. The addendum will describe additional investigation and assessment within the CGA Smelter Site, including the CAP Area.

1.3 Regulatory Framework

The Project will be a closed-loop hydroelectric facility licensed by FERC. The FERC application requires the following.

- A State Environmental Policy Act analysis to assess potential environmental impacts associated with the Project. Ecology is preparing an Environmental Impact Statement (EIS) for the Project. The EIS will help Washington State make decisions related to the Project based on environmental impacts.
- A signed Prospective Purchaser Consent Decree (PPCD). The Project Area is within the CGA Smelter Site property owned by NSC. The Applicant holds an option to purchase land within the Property Boundary from NSC. The Applicant is working with Ecology and the Washington Attorney General Office (AGO) to obtain a PPCD under MTCA for the Property Boundary to support purchase and redevelopment of the Project Area. The PPCD requires the Applicant to complete certain cleanup actions under requirements of MTCA.

The sections below describe requirements for cleanup actions within the Project Area and stakeholders in the PPCD.

1.3.1 Model Toxics Control Act

Cleanup conducted under MTCA requires potentially liable parties or Ecology to prepare specific documents. The procedural tasks and resulting documents, along with the relevant MTCA reference, are listed below with a brief description of each.

- Remedial Investigation and Feasibility Study (RI/FS) (WAC 173-340-350). The RI/FS documents the investigations and evaluations conducted at the Site from the discovery phase to the RI/FS report. The RI collects and presents information on the nature and extent of contamination and the risks posed by the contamination. The FS evaluates cleanup alternatives and proposes a cleanup alternative. The documents are usually prepared by the responsible parties, accepted by Ecology, and provided to the public for comment.
- Cleanup Action Plan (CAP) (WAC 173-340-380): sets cleanup standards for the site, and selects the cleanup actions intended to achieve the cleanup standards. Ecology issues the document after public comment.
- Public Participation Plan (Washington Administrative Code [WAC] 173-340-600): coordinates and encourages public involvement. Ecology prepares this document.
- Engineering Design Report, Construction Plans and Specifications (WAC 173-340-400): details the selected cleanup, including engineered systems and design components described in the CAP. The design is usually prepared by the responsible parties and accepted by Ecology. Public comment is optional.
- Health and Safety Plan (WAC 173-340-400): describes measures to meet safety and health requirements of WAC 173-340-810. The document is usually prepared by the responsible parties and accepted by Ecology.
- Cleanup Action Report (WAC 173-340-400): details the completed cleanup and documents adherence to or variance from the CAP and design. The document is usually prepared by the responsible parties and accepted by Ecology.
- Compliance Monitoring Plan (WAC 173-340-410): details monitoring required to demonstrate that the cleanup is implemented as intended and describes sampling and analysis to meet the requirements of WAC 173-340-820. The document is usually prepared by the responsible parties and accepted by Ecology.

1.3.2 Stakeholders

Ecology will consult with the following key stakeholders during development and implementation of the RI/FS, CAP, and PPCD.

1.3.2.1 United States Environmental Protection Agency (EPA)

The CGA Smelter Site is a RCRA Corrective Action site. Accordingly, Ecology must provide the EPA opportunity to provide input on the project at key decision points. Ecology will consult with EPA about the project before beginning work on the PPCD, as related to RCRA requirements. Ecology plans to solicit EPA input on the RI/FS, CAP, and PPCD after the documents have been prepared and before public comment is solicited.

1.3.2.2 Yakama Nation

The CGA Smelter Site is located in a treaty-defined “usual and accustomed fishing area” of the Confederated Tribes and Bands of the Yakama Nation. The North Shore Treaty Fishing Access Site is located approximately 1 mile from the CGA Smelter Site adjacent to the Columbia River immediately upstream of the John Day Dam (Ecology 2014).

Ecology has a Memorandum of Understanding with the Yakama Nation for governmental coordination on state-led cleanup sites of interest to the Tribe. Ecology is currently coordinating with the Yakama Nation on the site-wide cleanup work at the CGA Smelter Site. Ecology and the Tribe share technical information for the CGA Smelter Site as it is developed and coordinate comments on cleanup studies, plans, and documents. Ecology anticipates that the same approach will be used for the RI/FS, CAP and PPCD development for cleanup actions within the Project Area.

2. SITE DESCRIPTION

The CGA Smelter Site is located adjacent to the Columbia River approximately 9 miles southeast of the City of Goldendale in Klickitat County and includes portions of Sections 20 and 21 in T3N, R17E, Willamette Meridian. The 652 acres that make up the Project Area are located within the 7,000-acre former CGA Smelter (i.e., the Project Area; Figure 1).

2.1 Site History

The CGA Smelter Site operated as a primary aluminum smelting facility after being built in 1969 and 1970 by Harvey Aluminum Company. The smelter had one major expansion in 1971. Martin Marietta owned the plant (later LMCO) from 1971 to 1985. Other owners included Commonwealth Aluminum from 1985 through 1987, Columbia Aluminum from 1987 through 1996, and Goldendale Aluminum from 1996 through closure in 2003. NSC currently owns the site and surrounding land.

The smelter facility operated nearly continuously from the early 1970s until 2003. Since 2003, the site owners demolished structures on the former plant site, except for a few storage buildings and a small active wastewater treatment plant permitted under National Pollutant Discharge Elimination System (NPDES) permit WA0000540. Figures 1 and 2 show the Project Area and the overlap with CGA Smelter Site SWMU 4 (the WSI).

2.2 Remedial Investigation of the CGA Smelter Site

The *Draft Remedial Investigation Report* (Tetra Tech 2019) characterized the nature and extent of contamination in the WSI (SWMU 4) area of the CGA Smelter Site. The following subsections describe results of the RI of the Project Area. Section 2.4 lists the applicable cleanup levels (CULs).

A Preliminary Assessment/Site Investigation prepared by Ecology (Ecology 1989) identified 32 SWMUs and five Areas of Concern (AOCs) on the CGA Smelter Site. The SWMUs and AOCs designations reflect findings of investigations, RCRA permits and closure documentation, historical documents, and knowledge of past operations at the CGA Smelter. NSC and LMCO are conducting an RI/FS of the CGA Smelter site under the review and approval of Ecology focused on the identified SWMUs and AOCs. To date, the RI/FS has included soil sampling, sediment sampling, and groundwater monitoring well installation/sampling throughout the CGA Smelter site, including the Project Area.

The WSI is the only SWMU that is within the boundaries of the Project Area (also see Section 2.2.1). The chemicals of concern (COCs) in the WSI are fluoride and sulfate. COCs are chemicals identified through risk assessment that may pose threat to human health and the environment.

SWMU 13, the spent pot liner (SPL), is immediately east of the Project Area. Construction and operation of the Project will not impact SWMU 13.

Groundwater in the Uppermost Aquifer is an AOC for CGA Smelter site (see Section 2.2.2). Fourteen of the CGA Smelter Site groundwater monitoring wells are within the Project Area. Eleven of those wells are located within the Project footprint must be abandoned to construct the Project.

2.2.1 West Surface Impoundment (SMWU-04)

The WSI is the only SWMU that is within the Project Area. The smelter operators constructed the approximately 10-acre WSI in 1981 as an earthen impoundment with bottom liner of two layers of 15-millimeter thick Hypalon. The wastes in the WSI include the following (Parametrix 2004).

- Sludge from plant process (i.e., tertiary plant waste solids underflow, sulfur dioxide scrubbers underflow, and thickener and reaction clarifier filter press cake)

- Basement cleanup and cell line sweepings
- Dormer dust
- Paving cleanup
- Sludge from auto shop wash station
- Sludge from paste plant cooling water
- Cleanup soil from paste plant
- Filter cake

The WSI managed waste through evaporation of wastewater and disposal of emission control sludge. The WSI contained approximately 89,000 cubic yards of material at the time of closure in 2004 (Parametrix 2004). Appendix A includes details of the approximate location of each type of waste within the WSI at the time of closure (see Figure A1 adapted from Parametrix [2004]).

During the initial years of operation, the CGA Smelter operator managed the WSI under the operational and monitoring requirements of RCRA. In August 2004, Goldendale Aluminum Company submitted a revised Part A and Part B Dangerous Waste Permit Application for the WSI. The revised application was necessary because the operator closed the WSI as a RCRA facility, although Ecology classified the WSI sludge as a solid waste. Originally, Ecology designated the WSI sludge as a state dangerous waste under WAC 173-303 until the regulations were amended in 1997, at which time the sludge was designated as a solid waste. Five composite WSI sludge samples passed a bioassay test (Goldendale Aluminum Company 1997; Ecology 1997), confirming that the WSI sludge was subsequently classified as a non-hazardous, non-dangerous, solid waste.

Although Ecology agreed that the WSI wastes were non-hazardous and non-dangerous, the operator closed the WSI in accordance with RCRA regulations in 2004. NSC and LMCO have conducted site inspections and groundwater monitoring, under the oversight and review of Ecology and the EPA, as required by the RCRA closure plan.

Closure of the WSI included the following elements.

- Blending site borrow material with the landfill contents such that they would support construction equipment and consolidation of the landfill contents to reduce the impoundment footprint.
- Installing a ventilation system consisting of 12-inch wide strip drains, below the liner system that leads to three vertical ventilation pipes.
- Covering the landfill contents with an engineered RCRA cap that consists of geosynthetic clay liner, 30-millimeter thick polyvinyl chloride (PVC) geomembrane, and an 8-ounce nonwoven geotextile.
- Placing a 2-foot thick layer of cover soil consisting of soil from the on-site borrow pit and soils from the existing south berm road.
- Hydroseeding the final cover system.

Appendix A includes figures showing the final grading plan for the WSI after closure (Figure A2), a recent aerial photograph (Figure A3), and a geologic cross-section of the WSI (Figure A4). As shown on Figure A4, the base of the WSI was approximately 10 feet above the water table in the unconsolidated deposits.

The CGA Smelter implemented a post-closure maintenance and groundwater monitoring plan as part of the WSI closure. The groundwater monitoring network consists of 16 monitoring wells, including monitoring well clusters that monitor different depth intervals of groundwater in the Uppermost Aquifer. Sampling and analysis of groundwater began in 1984. Pre-closure sampling of five wells conducted in September 2004 established the conditions before closure of the WSI. The five wells were sampled

quarterly from 2005 to 2007, semiannually from 2008 to 2010, and annually beginning in 2011. Figure 2 shows the location of groundwater monitoring wells near the WSI. Appendix B includes monitoring well construction details (Table B1) and sampling results (Table B2).

2.2.2 Uppermost Aquifer Groundwater AOC

The groundwater AOC underlies the entire CGA Smelter site due to impacts attributable to multiple SWMUs. Groundwater beneath the southern portion of the Project Area is considered part of the Groundwater in the Uppermost Aquifer AOC.

In areas where there is a thicker sequence of unconsolidated deposits above the basalt bedrock, the uppermost aquifer is typically encountered in the unconsolidated deposits. Where the unconsolidated deposits are thin or absent, the uppermost groundwater is encountered in the basalt bedrock. As shown on Figure B4, the uppermost groundwater near the WSI within the Project Area is within the unconsolidated deposits. Figure 2 shows the location of groundwater monitoring wells in and near the Project Area. Most of the monitoring wells shown on Figure 2 were installed as a part of operational and closure requirements for the WSI, while others (e.g., MW-18 on Figure 2) were installed to monitor the uppermost groundwater for impacts attributable to other facilities and operations on the CGA Smelter Site.

Groundwater flow in the uppermost aquifer in the Project Area is generally southwestward toward the Columbia River. Appendix B, Figures B1 and B2, show groundwater elevations in the unconsolidated deposits and the upper basalt in the Project Area, as measured in 2018.

Table B2 lists selected groundwater quality data for monitoring wells in the Project Area, as measured in samples collected as a part of the CGA Smelter RI/FS and ongoing groundwater by the Smelter PLPs (Tetra Tech 2019; GeoPro 2021). The data indicate that the uppermost groundwater beneath the Project Area is impacted with fluoride and sulfate. Appendix B includes Figures from the CGA Smelter RI/FS showing fluoride and sulfate concentrations in groundwater in from samples collected in 2017 (Tetra Tech 2019).

2.2.3 Chemicals of Concern

COCs in soil at the WSI are fluoride and sulfate, which are constituents in the wastes disposed of in the WSI (Tetra Tech 2019). Cryolite bath is the source of the fluoride. Coke and pitch used in the manufacture of pot liners is the source of sulfate. This CAP focuses on the Applicant's plan to excavate the WSI. Table 1 lists screening levels used to identify COCs in soil.

The RI for the CGA Smelter Site identified COCs in groundwater by comparing concentrations in groundwater to drinking water maximum contaminant levels (MCLs), MTCA Method B formula values, or secondary MCLs. Secondary MCLs are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (taste, color, odor). The CGA Smelter Site RI identified fluoride and sulfate as COCs in groundwater. For fluoride, the MCL is 4.0 mg/L and the MTCA Method B formula value is 0.96 mg/L. There are no Washington risk-based screening levels for sulfate. The CGA Smelter Site RI used the sulfate secondary MCL of 250 mg/L for screening. This CAP does not identify cleanup actions for groundwater beneath the CGA Smelter Site or the Project Area. The applicants plan to abandon and relocate certain monitoring wells as necessary to construct the Project and monitor groundwater beneath and near the Project Area.

2.3 Human and Ecological Exposure

The CGA Smelter Site is currently zoned for industrial use. Land use surrounding the CGA Smelter Site includes livestock grazing, primarily cattle, in the sagebrush/grassland habitat (Tetra Tech 2019). Access to CGA Smelter Site and the Project Area is restricted, with most of the area fenced with locked gates.

Exposures by humans could occur through contact with or ingestion of contaminated subsurface soil, dust entrained in air; or use of contaminated groundwater. The 2019 Tetra Tech RI/FS describes possible exposure to CGA Smelter Site related contaminants. Potential human receptors at the CAP Area include current and future users of the CAP Area, potential trespassers, and potential future users of CAP Area groundwater. During remedial construction, construction workers could also be exposed if dust is not well controlled. Current water rights identify drinking water as a possible beneficial use (PGG 2014); however, there are currently no drinking water wells located in the Project Area.

Ecological exposure to COCs within the CAP Area is unlikely given the location of soil impacts are limited to the WSI which is a low-quality habitat and secured with fencing. Wildlife is not considered a potential receptor. The WSI is a landfill with an engineered RCRA cap consisting of soil and geosynthetic materials. Quarterly inspections and maintenance are completed to maintain integrity of the cap including removal of rodent holes and vegetation clearance (GeoPro 2021). According to MTCA WAC 173-340-7491(b), the WSI is exempted from Terrestrial Ecological Evaluation requirements as it was closed under RCRA program requirements and is undergoing long-term post-closure groundwater monitoring.

2.4 Cleanup Levels

A cleanup level is target concentration in environmental media established to protect a human or ecological receptor at a point of exposure. A point of compliance (POC) is a location where an enforceable limit is measured and the concentration of a hazardous substance that must be met to avoid risks to human health and the environment through a specified exposure pathway. CULs were developed fluoride and sulfate in soil and groundwater in the Project Area.

Soil CULs for the WSI were selected as the lower of values to protect site workers or to protect groundwater quality. Table 1 lists the soil screening levels.

- The Method C Industrial cleanup level for fluoride in soil is 210,100 milligrams per kilogram (mg/kg). There is no MTCA Method C Industrial cleanup level for sulfate in soil.
- Screening concentrations in soil to protect groundwater at the CGA Smelter Site are 615 mg/kg for fluoride and 2,150 mg/kg for sulfate (Tetra Tech 2019). There are no water supply wells within the Project Area.

Accordingly, the soil CULs for the WSI are 210,100 mg/kg for fluoride and 2,150 mg/kg for sulfate.

Groundwater CULs for the CGA Smelter Site were identified as drinking water MCLs, MTCA Method B formula values, or secondary MCLs. The MCL for fluoride in groundwater is 4.0 mg/L, and the MTCA Method B formula value is 0.96 mg/L (Tetra Tech 2019). There is no groundwater MCL for sulfate. The CGA Smelter Site RI used the sulfate secondary MCL of 250 mg/L to screen sulfate concentrations in groundwater. This DCAP does not specify corrective actions in groundwater. The Smelter PLPs will conduct corrective action in groundwater under the Order.

2.5 Point of Compliance

The soil POC is established as the WSI area from the ground surface to a depth of 15 feet below ground surface. Construction of the Project will entail excavation of the WSI and impacted soil with COC concentrations that exceed the identified CULs. Soil below the WSI excavation with residual

concentrations of COCs lower than the soil CULs is not a risk to humans and will not adversely impact groundwater. Confirmation sampling after excavation will demonstrate concentrations of COCs at the excavation limits.

For purposes of assessing groundwater quality within the Project Area and the need to protect potential human exposure to contaminated groundwater, this DCAP identifies the area beneath the WSI and down gradient extent to the Property Boundary as a conditional POC for groundwater (i.e., the CAP Area).An environmental covenant to restrict use of groundwater within the CAP Area will be an institutional control to protect potential future users of groundwater in the CAP Area.

3. DESCRIPTION OF SELECTED REMEDY

ERM completed the initial screening of cleanup alternatives in the Project RI/FS (ERM 2021). The FS proposed a soil remedy according to requirements and procedures for selecting cleanup actions under MTCA (WAC 173-340-360(2)(a),(b),(c), and (d)).

3.1 Cleanup Action Location

This DCAP describes a cleanup action in soil within the Project Area where operations of the CGA Smelter Site have impacted soil. The cleanup action location is the WSI itself (i.e., SWMU 4) and soil near and below the WSI with concentrations of COCs exceeding the CULs. The Property Boundary overlies a portion of the groundwater AOC (i.e., the CAP Area). The Smelter PLPs are responsible for groundwater cleanup under the Ecology Order.

3.2 Description of Cleanup Action

The selected cleanup action for the WSI includes the excavation of the WSI and underlying contaminated soil exceeding CULs to a depth of 15 feet below the ground surface (Appendix A). The contaminated materials and soil will be disposed of at a landfill permitted to accept the waste. Excavation may extend deeper than 15 feet below the ground surface if COC concentrations exceed the CULs, as indicated by a pre-construction soil sampling program. Confirmation sampling of the excavation sidewalls and bottom will demonstrate compliance with the CULs.

Groundwater monitoring wells in the Project footprint will be decommissioned in accordance with Washington regulations (WAC 173-160-381) as a part of the construction of the Lower Reservoir. Groundwater monitoring wells will be installed, as needed, to replace the decommissioned wells for use by the Smelter PLPs to meet requirements of the Order.

An environmental covenant on groundwater use will be recorded at the Klickitat County Auditor's Office to provide long-term protection of human health and the environment. The covenant will specify institutional controls to limit, restrict, or prohibit activities that would interfere with the integrity of the cleanup action or result in exposure to contaminated groundwater. The covenant would be executed by the property owner and recorded with the register of deeds for Klickitat County. Interim controls will protect workers from exposure to contaminated soil or groundwater during construction.

3.3 Consistency with Cleanup Action Selection Criteria and Expectations

The proposed cleanup action complies with the cleanup action selection criteria contained in WAC 173-340-360. The summary below summarizes information in the Project RI/FS (ERM 2021).

3.3.1 Protectiveness

Removing waste in the WSI and associated impacted soil will be protective of human health and the environment. The WSI wastes and associated soil will be excavated and transported off-site. The waste and soil removal will eliminate potential human and ecological exposure and eliminate a potential source of COCs to groundwater.

3.3.2 Compliance with Cleanup Standards

Removing waste in the WSI and associated impacted soil will achieve MTCA Method C Industrial Cleanup Levels.

3.3.3 Compliance Monitoring

The Applicant will prepare a compliance monitoring plan (WAC 173-340-410) to describe confirmation sampling of the WSI excavation to document the excavation achieves CULs.

The Smelter PLPs will implement long-term groundwater monitoring at the CGA Smelter Site in accordance with requirements of the Order.

3.3.4 Use of Permanent Solutions

The proposed cleanup action is a permanent solution because excavation and off-site disposal will permanently remove the WSI source materials, thereby removing a potential contamination source to groundwater.

3.3.5 Restoration Timeframe

The soil cleanup action utilizes excavation and off-site disposal for removal of impacted waste and/or soil to accomplish cleanup of the WSI (i.e., SWMU 4) over a short time frame.

Groundwater cleanup actions required for the CGA Smelter Site including groundwater within the Project Area are the responsibility of Smelter PLPs under Ecology Order. The Applicant will implement institutional controls via an environmental covenant to limit, restrict, or prohibit activities that could result in exposure to contaminated groundwater within the conditional POC (the CAP Area). The institutional controls will be immediately effective to limit exposure to groundwater.

3.3.6 Public Concern

Ecology will prepare a public participation plan to inform the public of the cleanup actions. The Applicant will assist Ecology to prepare and implement the public participation plan as requested, which may include the preparation of mailing lists, fact sheets, and public notices.

3.4 Schedule for Implementation

The preliminary schedule for implementing the proposed cleanup action is shown in Appendix C. The schedule start is assumed to be the date that the CAP and PPCD are finalized. The start date depends on the Applicant's attainment of a FERC license and purchase of the land within the Property Boundary from NSC. A more detailed schedule will be prepared as part of the Engineering Design Report.

4. REFERENCES

Ecology (Washington State Department of Ecology). 1989. Site Inspection Report. Martin Marietta Aluminum. Goldendale, Klickitat County, Washington. May

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TABLES

Table 1
Soil Screening Level Summary
Draft Clean Up Action Plan
Adapted from Columbia Gorge Aluminum Smelter Site Remedial Investigation Volume 1, (Tetra Tech, 2019)
Goldendale, Washington

Chemicals of Concern	MTCA Screening Levels							Range of Background Concentrations
	Method A		Method B	Method C		Ecological Screening Levels [e,f]		
	Unrestricted Land Use	Industrial			Protection of Groundwater	Priority Contaminants - Industrial Site	Ecological Indicator - Wildlife	
(mg/kg)								
Cyanide (Free)	NE	NE	48	2,100	1.9/40.4 [b]	NE	NE	NE
Fluoride	NE	NE	4,800	210,000	615 [c]	NE	NE	14.11[a]
Sulfate	NE	NE	NE	NE	2,150 [d]	NE	NE	NE

Notes

a. Site-specific background value from PGG (2013a) site investigation.

b. Cyanide soil screening levels for protection of groundwater based on literature distribution coefficient, MTCA Method B groundwater formula value/MCL, and fixed parameter three phase partitioning mode.

c. Fluoride soil screening level for protection of groundwater based on empirical demonstration consistent with WAC 173-340-747.

d. Sulfate screening level for protection of groundwater based on literature distribution coefficient, secondary MCL, and fixed parameter three-phase partitioning mode

e. Priority Contaminants of Ecological Concern for Sites that Qualify for the Simplified Terrestrial Ecological Evaluation Procedure, Table 749-2, WAC 173-340-7492.

f. Ecological indicator soil concentration for protection of wildlife (Table 749-3, WAC 173-340-7493, MTCA).

MTCA = Model Toxics Control Act

NE = Not established in look-up Tables.

FIGURES

Upper Reservoir Outer Berm
Upper Reservoir
Headrace Tunnel
Powerhouse
Access Tunnel
Tailrace Tunnel
Water Supply Valve House
Multi-Use Tunnel
West Surface Impoundment
Lower Reservoir
John Day Dam Rd
Hartley Canyon
Substation
John Day Substation
Columbia River
Rufus
Scott Canyon Rd
Old Maryhill Rd
Columbia River Hwy
14
84
30
0 2,000 4,000 Feet
0 100 200 Miles

Legend

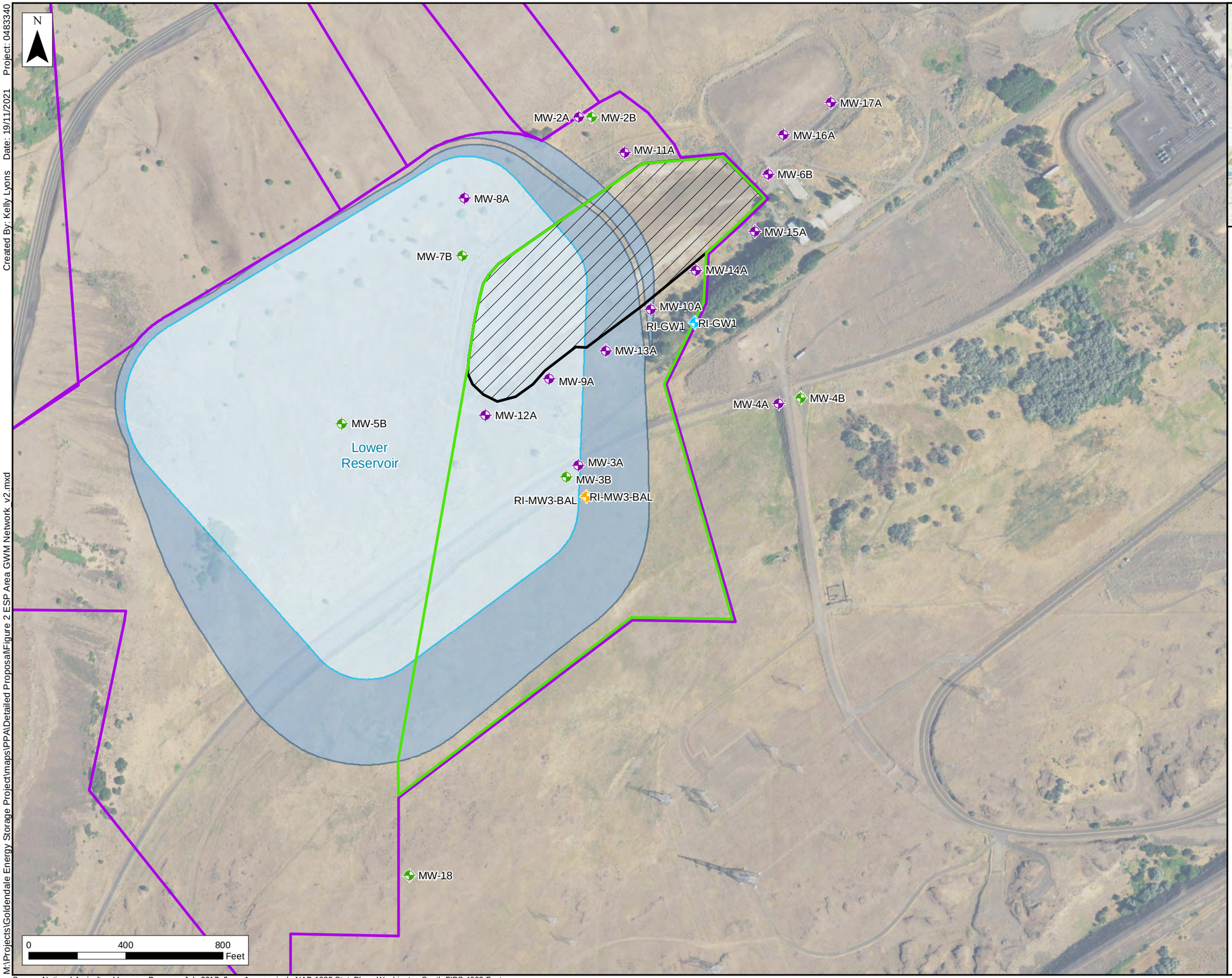
- West Surface Impoundment (WSI)
- FERC Project Boundary
- Property Boundary
- Reservoir
- Reservoir Berm Outer Slope
- Laydown Area
- Powerhouse
- Substation
- Water Supply Valve House
- Access Tunnel
- Access Tunnel Portal
- Headrace/Tailrace Tunnel

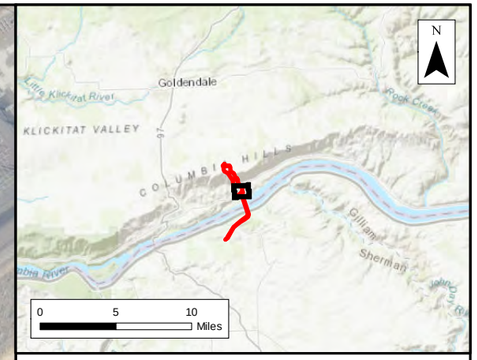
Figure 1
Project Location
Draft Cleanup Action Plan
Goldendale Energy Storage Project
at the Former Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

Environmental Resources Management
www.erm.com
ERM

Source: Esri - World Topographic Map; NAD 1983 HARN StatePlane Washington South FIPS 4602 Feet

Created By: Kelly Lyons Date: 11/19/2021 Project: 0483340
FILE: M:\Projects\Goldendale Energy Storage Project\maps\PPA\Detailed Proposal\Figure 1 Project Location.mxd | REVISED: 11/19/2021 | SCALE: 1:24,000 when printed at 11x17





Legend

Existing Well

- Unconsolidated Aquifer Well
- Uppermost Basalt Aquifer Well

Proposed Well

- Deep Well with Coring (BAL)
- Temporary Shallow Well
- West Surface Impoundment (WSI)
- Reservoir
- Reservoir Berm Outer Slope
- Property Boundary
- CAP Area / Groundwater institutional controls

Notes:
All well locations approximate, no survey data available.
CAP area includes impacts within the WSI (i.e., SWMU 4) and CGA Smelter Site groundwater impacts within the property boundary.

Figure 2
Project Area Detail
Draft Cleanup Action Plan
Goldendale Energy Storage Project
at the Former Columbia Gorge
Aluminum Smelter Site
Goldendale, Washington

Environmental Resources Management
www.erm.com

Created By: Kelly Lyons Date: 19/11/2021 Project: 0483340

M:\Projects\Goldendale Energy Storage Project\maps\PPA\Detailed Proposal\Figure 2 ESP Area GWM Network_v2.mxd

Source: National Agricultural Imagery Program, July 2017, flown 1m per pixel; NAD 1983 StatePlane Washington South FIPS 4602 Feet

APPENDIX A WSI DETAIL

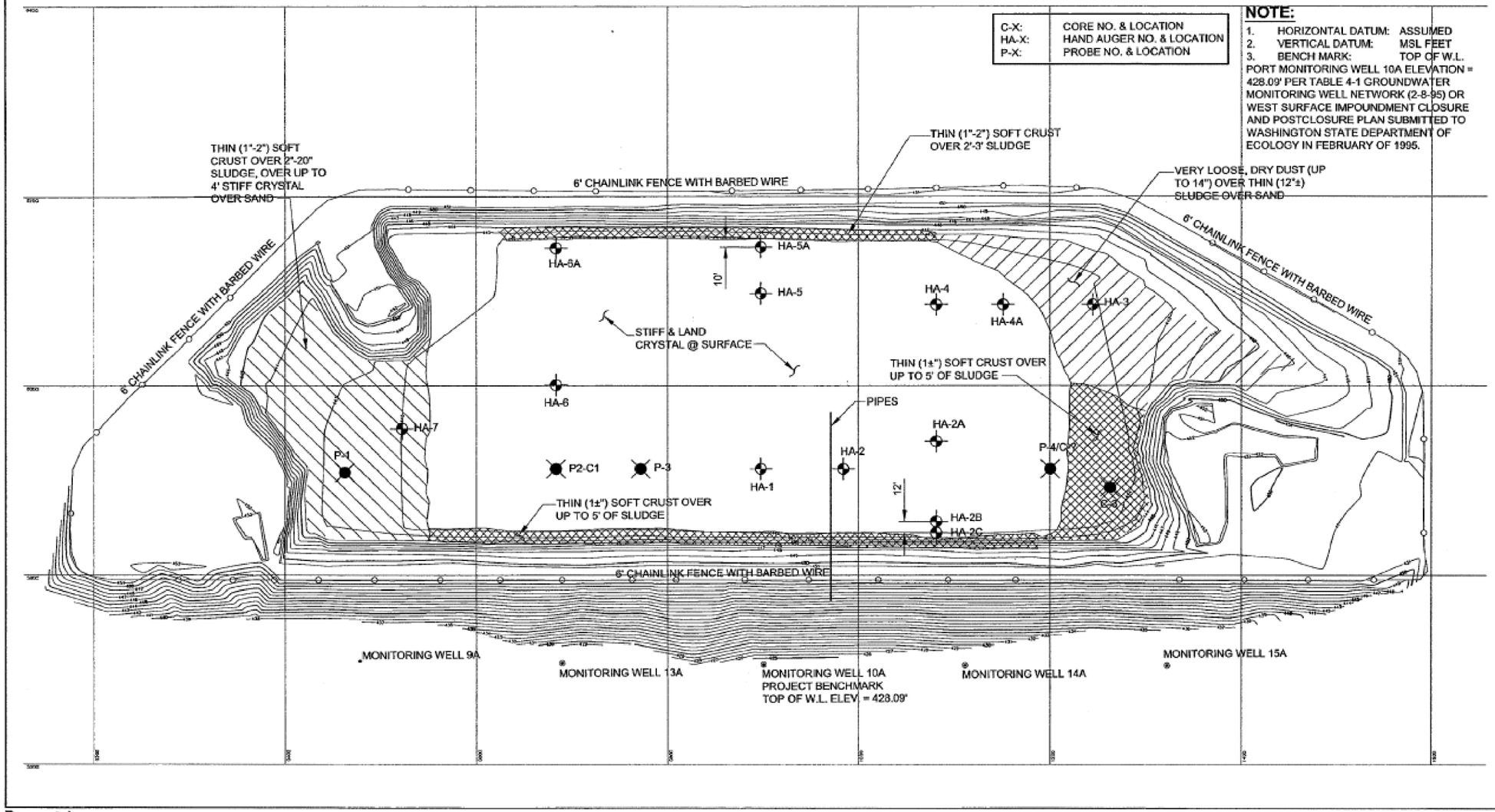
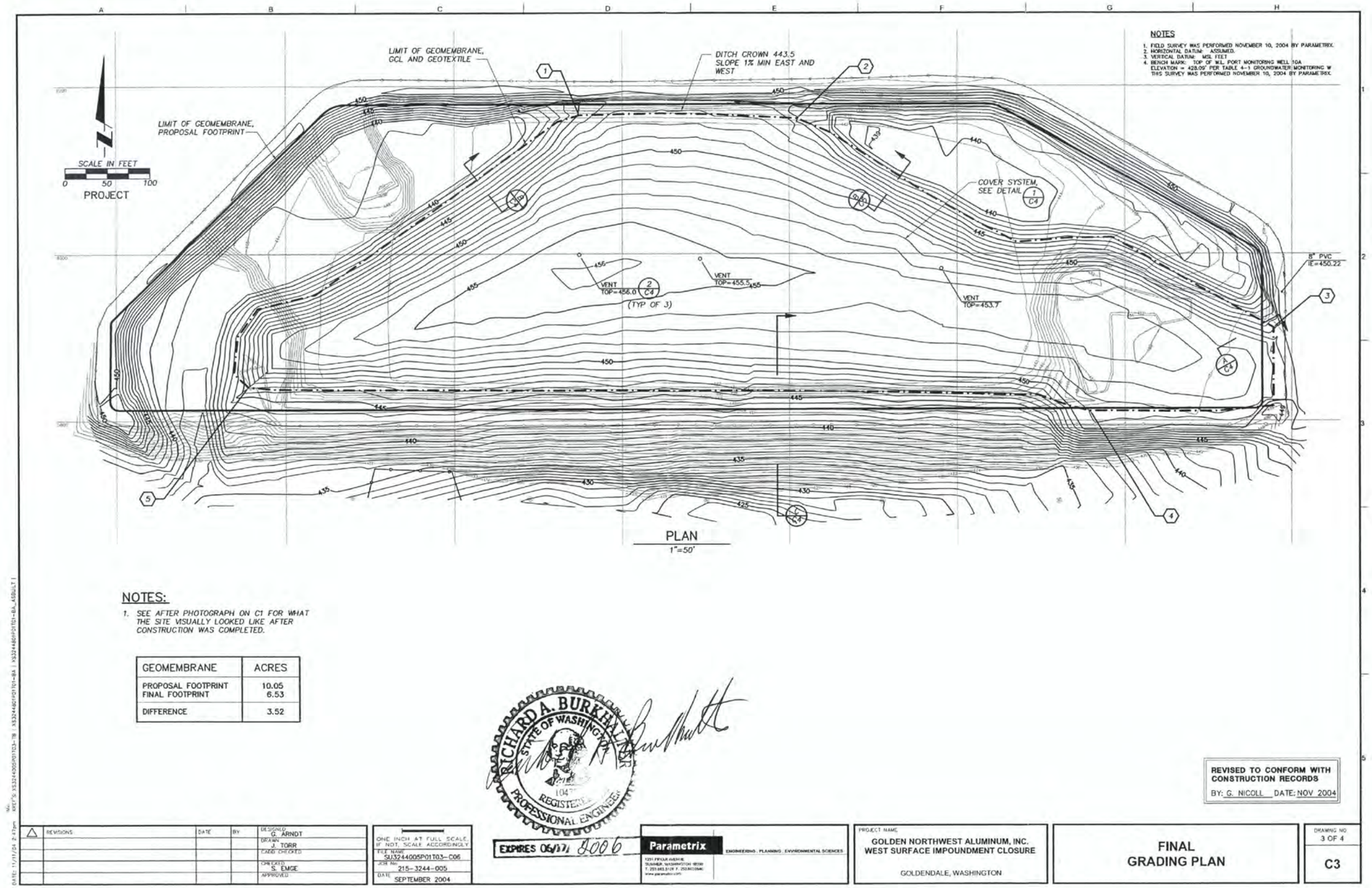


Figure 2-2
Waste Types & Locations
July 2004
Goldendale Aluminum

Source: Parametrix, Construction Quality Assurance Report, 2004.

Figure A1

Waste Types
Draft Cleanup Action Plan
Goldendale Energy Storage Project
Goldendale, Washington



NOTES:

1. SEE AFTER PHOTOGRAPH ON C1 FOR WHAT THE SITE VISUALLY LOOKED LIKE AFTER CONSTRUCTION WAS COMPLETED.

GEOMEMBRANE	ACRES
PROPOSAL FOOTPRINT	10.05
FINAL FOOTPRINT	6.53
DIFFERENCE	3.52

RICHARD A. BURKHALTER — STATE OF WASHINGTON — 10477 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 06/17/2006

REVISED TO CONFORM WITH CONSTRUCTION RECORDS
BY: G. NICOLL DATE: NOV 2004

REVISIONS	DATE	BY

DESIGNED: G. ARNDT
DRAWN: J. TORR
CADD CHECKED:
CHECKED: S. EMGE
APPROVED:

ONE INCH AT FULL SCALE IF NOT, SCALE ACCORDINGLY
FILE NAME: SW324400SP01T03-C06
JOB NO.: 215-3244-005
DATE: SEPTEMBER 2004

Parametrix — ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
1231 FIFTH AVENUE, SUNNYSIDE, WASHINGTON 98944
T. 509.837.3100 F. 509.837.3111
www.parametrix.com

PROJECT NAME
GOLDEN NORTHWEST ALUMINUM, INC.
WEST SURFACE IMPOUNDMENT CLOSURE
GOLDENDALE, WASHINGTON

FINAL
GRADING PLAN

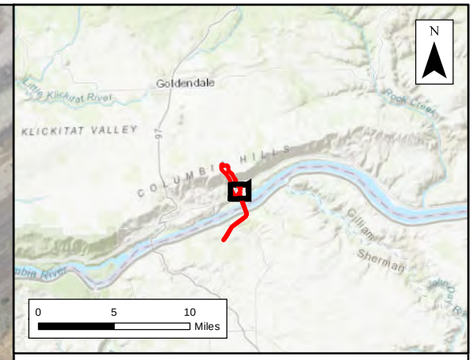
DRAWING NO.
3 OF 4
C3

Source: Parametrix, Construction Quality Assurance Report, 2004.

Figure A2

WSI 2004 Closure Final Grading Plan
Draft Cleanup Action Plan
Goldendale Energy Storage Project
Goldendale, Washington

Created By: Kelly Lyons Date: 7/23/2020 Project: 0483340



Legend

Project Boundary

Figure A3

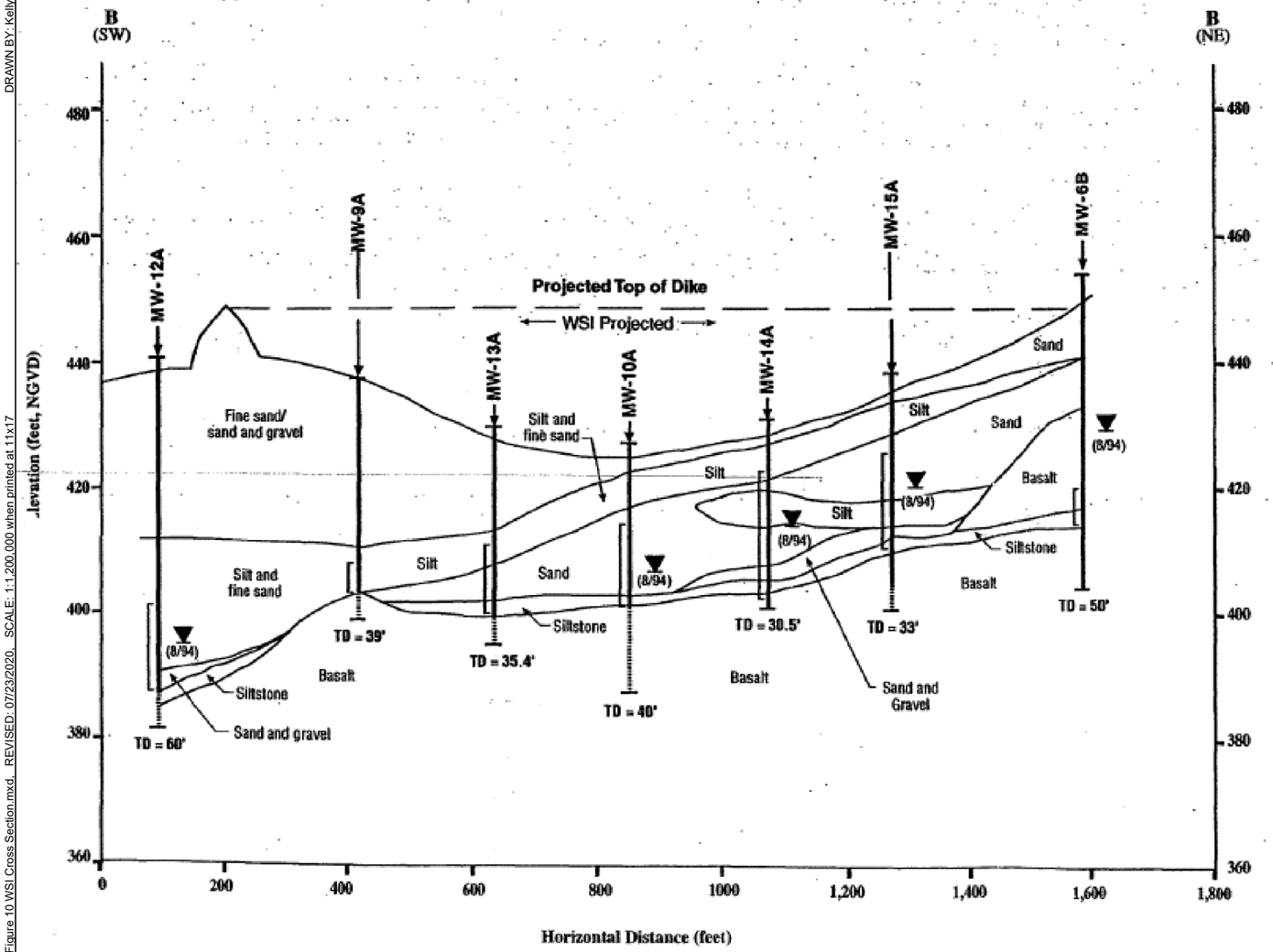
WSI Aerial Photograph
Draft Cleanup Action Plan
Goldendale Energy Storage Project
Goldendale, Washington

Environmental Resources Management
www.erm.com

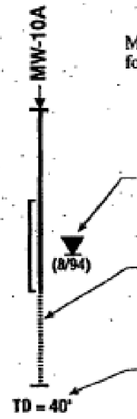
ERM

M:\Projects\Goldendale Energy Storage Project\maps\PPA\Detailed Proposal\Figure 9 WSI Aerial.mxd

Source: National Agricultural Imagery Program, July 2017, flown 1m per pixel; NAD 1983 StatePlane Washington South FIPS 4602 Feet



LEGEND



Monitoring well number. Refer to Figure 3-6 for well and cross section location map.

Static water level for August 1994

Dashed interval = boring backfilled with bentonite

Total well depth in feet below ground surface

NOTES

1. Wells MW-9A and MW-13A reported as "dry" after April and July 1992, respectively.
2. Subsurface conditions depicted on cross sections are interpretations and represent the opinion of the CH2M HILL hydrogeologist. Actual subsurface conditions may differ.

Vertical Exaggeration: 10X

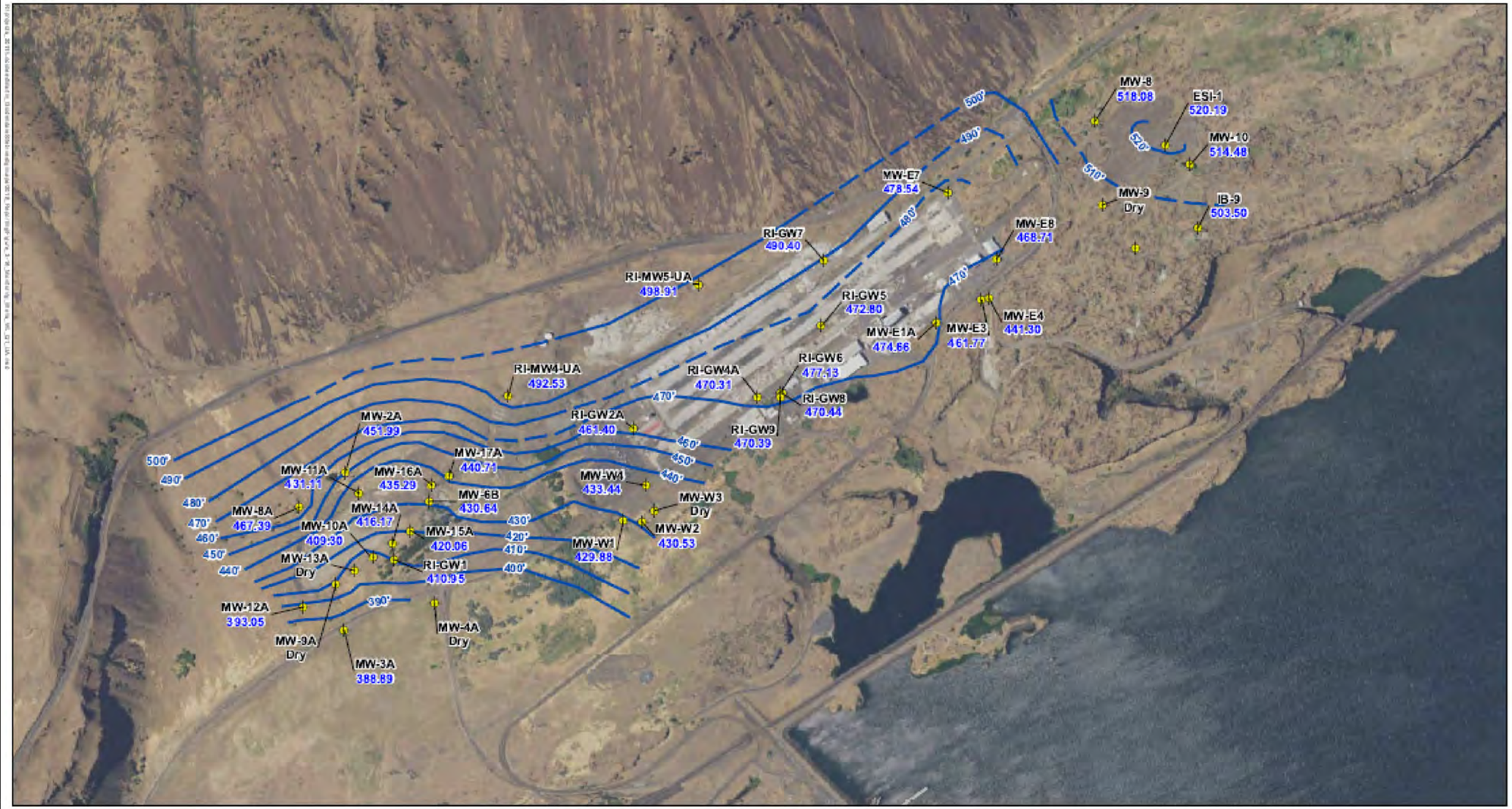
Figure 3-3
Hydrogeologic Cross Section B-B'

Source: Parametrix, Construction Quality Assurance Report, 2004.

Figure A4

West Surface Impoundment Cross Section
Draft Cleanup Action Plan
Goldendale Energy Storage Project
Goldendale, Washington

APPENDIX B GROUNDWATER CONDITIONS



Legend

- Unconsolidated Aquifer (UA) Well
- 388.89 Round 1 (Winter 2017) Static Water Level Elevation
- 300' 10' Water-Level Elevation Contour

N W E S

0 500 1,000 2,000

Feet

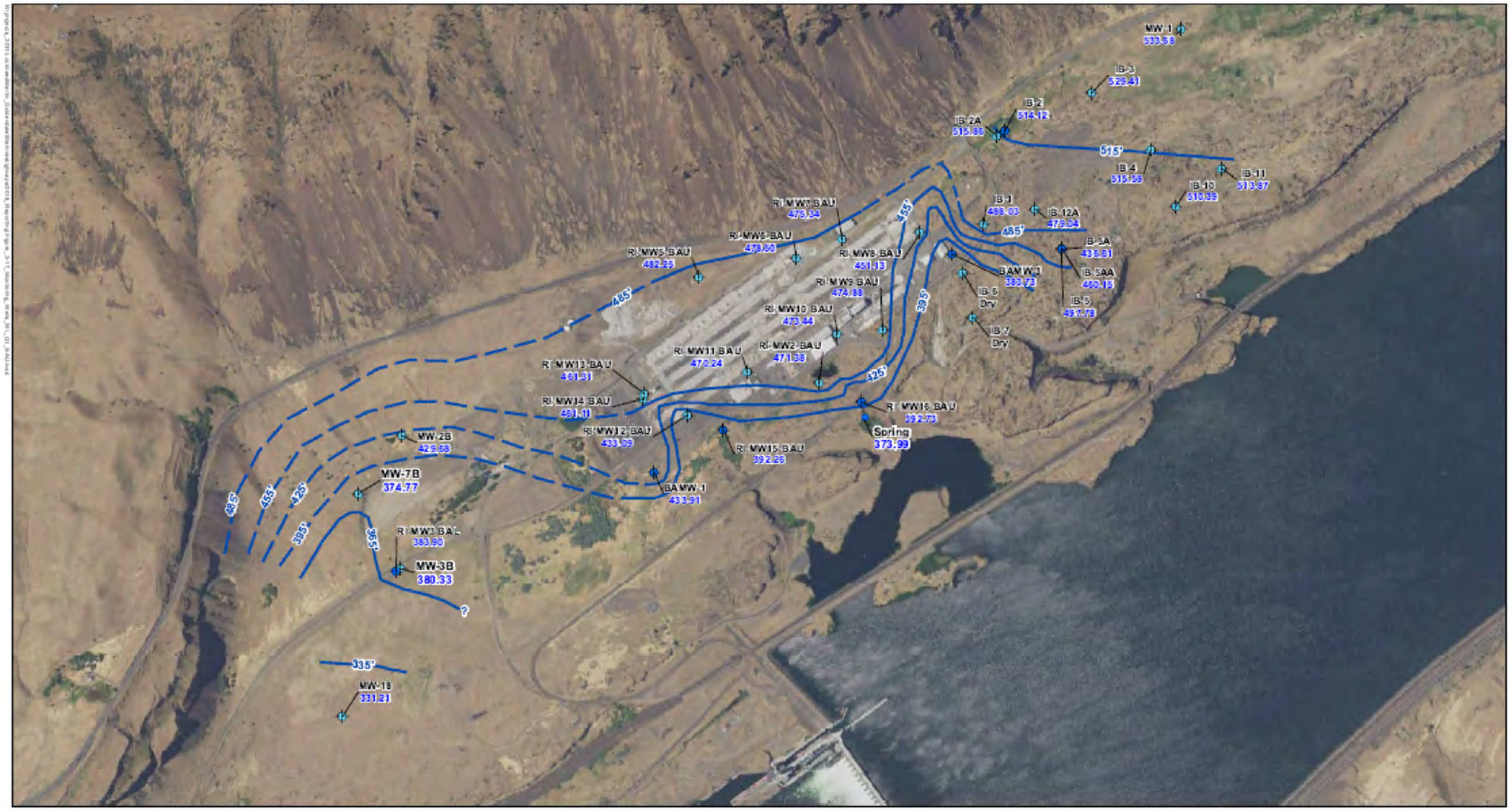
Imagery Source: NAIP 2017

Figure 2-16
Water-Level Elevations
Unconsolidated Aquifer Wells (UA)
Quarter 1 (Winter 2017)

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

Figure B1
Potentiometric Surface for Uppermost Aquifer Groundwater Wells
Draft Cleanup Action Plan
Goldendale Energy Storage Project Goldendale, Washington

Source: Tetra Tech, et al., 2017.



Legend

Uppermost Basalt Aquifer Well (BAU)

BAU_1 - Shallower Water-bearing Zone

BAU_2 - Deeper Water-bearing Zone

331.21 Round 1 (Winter 2017) Water-Level Elevation

515' 30' Water-Level Elevation Contour

Spring

N
W E
S

0 500 1,000 2,000
Feet

Imagery Source: NAIP 2017

Figure 2-17
Water-Level Elevations
Uppermost Basalt Aquifer Wells (BAU)
Quarter 1 (Winter 2017)

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

Figure B2
Potentiometric Surface for Uppermost Basalt Aquifer Groundwater Wells
Draft Cleanup Action Plan
Goldendale Energy Storage Project Goldendale, Washington

Source: Tetra Tech, et al., 2017.

Appendix B - TABLES

Table B1. Monitoring Well Construction Information

Table B2. Summary of Groundwater Monitoring Results at WSI

Table B1
Monitoring Well Construction Information
Draft Cleanup Action Plan
Goldendale Energy Storage Project, Goldendale, WA

Well ID	Construction Date	Well Material	Well Diameter (in)	Screen Interval (ft bgs)	Total Depth of Well (ft bgs)
MW-02A	4/5/1984	PVC Schedule 40	2	50 - 55	55
MW-02B	4/5/1984	PVC Schedule 40	4	104 - 109	109
MW-03A	4/13/1984	PVC Schedule 40	2	19.5 - 24.5	24.5
MW-03B	4/7/1984	PVC Schedule 40	4	46 - 51	51
MW-04A	4/17/1984	PVC Schedule 40	4	16 - 21	21
MW-04B	NA	NA	4	35 - 40	50
MW-05B	NA	NA	4	97 - 102	110
MW-06B	4/20/1984	PVC Schedule 40	4	35 - 40	50
MW-07B	4/25/1984	PVC Schedule 40	2	104 - 109	109
MW-08A	5/7/1989	PVC Schedule 40	4	21.5 - 31.5	32
MW-09A	4/18/1989	PVC Schedule 40	4	30.5 - 35.5	35.5
MW-10A	4/20/1989	PVC Schedule 40	4	13 - 25.5	26
MW-11A	4/28/1989	PVC Schedule 40	4	19 - 29	29.5
MW-12A	5/2/1989	PVC Schedule 40	4	40 - 54	55
MW-13A	5/4/1989	PVC Schedule 40	4	18.5 - 30.5	31
MW-14A	5/6/1989	PVC Schedule 40	4	8.5 - 29.5	30.5
MW-15A	5/6/1989	PVC Schedule 40	4	12.5 - 28	29
MW-16A	1/10/1990	PVC Schedule 40	4	22 - 42	43
MW-17A	1/10/1990	PVC Schedule 40	4	15 - 35	35
MW-18	10/1/2004	NA	4	35 - 50	51

Notes:
in = inches
ft = ft
bgs = below ground surface
NA = Not available.
MW-4B and MW-5B were abandoned in 1989.

Table B2
Summary of WSI Groundwater Monitoring Data
Draft Cleanup Action Plan
Goldendale Energy Storage Project, Goldendale, WA

	Location ID	Upgradient Well MW-8A		Downgradient Well MW-3B		Downgradient Well MW-10A		Downgradient Well MW-12A		Downgradient Well MW-14A		Downgradient Well MW-18	
	Analyte	Sulfate	Fluoride	Sulfate	Fluoride	Sulfate	Fluoride	Sulfate	Fluoride	Sulfate	Fluoride	Sulfate	Fluoride
Lowest Groundwater Protection Standard		250	0.96	250	0.96	250	0.96	250	0.96	250	0.96	250	0.96
Sample Date	**Unit**												
2/16/2005	mg/L	**10**	**0.9**	**2300**	**0.6**	**940**	**1.8**	*Dry*	*Dry*	**4000**	**9.6**	**1500**	**0.6**
5/11/2005	mg/L	**9.8**	**0.3**	**2500**	**0.4**	**910**	**1.5**	*Dry*	*Dry*	**3500**	**8.6**	**1300**	**0.4**
8/29/2005	mg/L	**8.9**	**0.4**	**2700**	**0.6**	**670**	**1.2**	*Dry*	*Dry*	**3600**	**30**	**1500**	**0.4**
11/1/2005	mg/L	**9.6**	**0.9**	**2600**	**0.9**	**670**	**2.7**	*Dry*	*Dry*	**2800**	**25**	**1300**	**1.8**
2/27/2006	mg/L	**9.27**	**2.8**	**2610**	**0.7**	**1570**	**2.3**	*Dry*	*Dry*	**2170**	**31**	**1520**	**0.9**
6/5/2006	mg/L	**9.8**	**0.2**	**2220**	**0.2**	**1650**	**3.2**	*Dry*	*Dry*	**2380**	**27**	**1490**	**0.2**
7/31/2006	mg/L	**9.8**	**0.1**	**2000**	**3.7**	**860**	**2.3**	*Dry*	*Dry*	**3300**	**30**	**1500**	**2.6**
10/9/2006	mg/L	**9.7**	*<0.2*	**2500**	**3.8**	**850**	**1.9**	*Dry*	*Dry*	**3900**	**24**	**1600**	**2.4**
3/13/2007	mg/L	**10**	*<0.1*	**2500**	**3.8**	**1100**	**3.4**	**1800**	**6.3**	**4400**	**16**	**1600**	**2.6**
6/22/2007	mg/L	**1**	*<10*	**2500**	<10	**1100**	*<10*	*Dry*	*Dry*	**7900**	**19**	**1700**	*<1*
9/24/2007	mg/L	**10**	*<1*	**2200**	<1	**760**	**1.2**	*Dry*	*Dry*	**6400**	*<50*	**1400**	*<50*
11/14/2007	mg/L	--	--	--	--	--	--	*Dry*	*Dry*	--	--	--	--
5/8/2008	mg/L	**10**	*<1*	**2200**	<50	**2700**	*<50*	*Dry*	*Dry*	**5500**	*<50*	**1300**	*<50*
10/14/2008	mg/L	**10**	**0.1**	**2600**	<10	**860**	*<10*	*Dry*	*Dry*	**6500**	**20**	**1600**	*<1*
5/29/2009	mg/L	**9**	*<1*	**2200**	<1	**2000**	**2**	*Dry*	*Dry*	**7000**	**30**	**1500**	**1**
10/27/2009	mg/L	**10**	*<1*	**2606**	<1	**760**	<1	*Dry*	*Dry*	**5900**	**24**	**1200**	<1
5/26/2010	mg/L	**9.3**	*<1*	**2300**	**2.3**	**2200**	**4.4**	*Dry*	*Dry*	**5200**	**32**	**1500**	**2**
10/6/2010	mg/L	**8.9**	*<1*	**2400**	<1	**710**	**1**	*Dry*	*Dry*	**4000**	**18**	**1600**	*<1*
7/26/2011	mg/L	**7.8**	*<1*	**2000**	<1	**1800**	**3.3**	*Dry*	*Dry*	**3900**	**23**	**1600**	*<1*
4/19/2012	mg/L	**10**	**0.18**	**2200**	**0.16**	**5800**	**1.9**	*Dry*	*Dry*	*Dry*	*Dry*	**1700**	**0.2**
6/20/2013	mg/L	**9.4**	**0.16**	**1900**	**0.16**	**4700**	**3.1**	*Dry*	*Dry*	**2300**	**17**	**1500**	**0.13**
4/25/2014	mg/L	**9.5**	**0.19**	**2000**	**0.18**	**6100**	**2**	*Dry*	*Dry*	**2100**	**18**	**1700**	**0.12**
7/20/2015	mg/L	**9.5**	**0.16**	**1900**	**0.14**	**1900**	**2**	*Dry*	*Dry*	**1100**	**6.8**	**1300**	**0.11**
8/2/2016	mg/L	**9.3**	**0.13**	**1900**	**0.12**	**3500**	**2.1**	*Dry*	*Dry*	**1400**	**3.5**	**1700**	**0.12**
8/9/2017	mg/L	**9.6**	**0.15**	**1700**	**0.15**	**2900**	**3.2**	*Dry*	*Dry*	**1700**	**2.5**	**1300**	**0.11**
7/26/2018	mg/L	**9.5**	**0.15**	**1800**	**0.16**	**4800**	**4.1**	*Dry*	*Dry*	**1800**	**3.6**	**1400**	**0.11**
7/24/2019	mg/L	**5.4**	**0.14**	**1500**	**0.15**	**4000**	**3.7**	*Dry*	*Dry*	**1700**	**2.8**	**1200**	**0.12**
6/20/2020	mg/L	**11**	**0.16**	**1700**	**0.14**	**5700**	**4.4**	*Dry*	*Dry*	**2000**	**7**	**1400**	**0.13**
7/29/2021	mg/L	**9**	**0.15**	**1500**	**0.17**	*Dry*	*Dry*			**1100**	**7.8**	**1200**	**0.11**

Notes:

Data compiled from the *2021 Annual Groundwater Monitoring Report and Surface Maintenance Report. September 20, 2021, Appendix A*
< = Compound not detected at concentrations above the laboratory reporting detection limit.
The laboratory reporting detection limit is shown.
Bold are detected results
Grey shaded cells = results exceed lowest groundwater protection standard
Empty cells = Data not available from GeoPro LLC 2021 Annual Groundwater Monitoring Report
-- = Data not available from GeoPro LLC 2021 Annual Groundwater Monitoring Report
mg/L = Milligrams per liter

Appendix B - Groundwater Conditions from Tetra Tech 2019 Remedial Investigation

R:\projects_2011\LockheedMartin_Goldendale\siteinvestigmaps\2018_Reporting\Figure_2-25_Monitoring_Wells_Fluoride_Q1-4_UA.mxd

NESI Wetland
Q1: 20 J
Q2: NS
Q3: NS
Q4: NS

MW-8
Q1: 20
Q2: 8.9
Q3: 6.5
Q4: 6.4

ESI-1
Q1: 31 J
Q2: 13
Q3: 9.7
Q4: 11

MW-10
Q1: 8 J
Q2: 5.5
Q3: 4.8
Q4: 4.5

MW-9
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

IB-9
Q1: 4.5 J
Q2: 6.8
Q3: 7.7
Q4: 0.030 U

MW-E7
Q1: 3.3 J
Q2: 2.3 J
Q3: 2.4 J
Q4: 2.7

MW-E8
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-E3
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-E4
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-E1A
Q1: 11 J
Q2: 29
Q3: 24
Q4: 20

RI-GW7
Q1: 17
Q2: 13
Q3: 6.7 J
Q4: 15 J

RI-GW5
Q1: 17
Q2: 16 J
Q3: 17 J
Q4: 17

RI-GW6
Q1: 10
Q2: 16
Q3: Dry
Q4: 7.0

RI-MW5-UA
Q1: 0.27
Q2: 0.56
Q3: 0.30
Q4: 0.19 J

RI-MW4-UA
Q1: 0.15 J
Q2: 0.29
Q3: 0.22
Q4: 0.13 J

RI-GW4A
Q1: 4.8
Q2: 5.1 J
Q3: 5.5
Q4: 5.5

RI-GW2A
Q1: 2.7
Q2: 2.8 J
Q3: 3.3 J
Q4: 2.7 J

RI-GW9
Q1: 2.7
Q2: 0.72
Q3: 1.0
Q4: 0.65

RI-GW8
Q1: 4.4
Q2: 2.4
Q3: 1.1
Q4: 3.1

Stormwater Pond
Q1: 4.2 J
Q2: NS
Q3: NS
Q4: NS

Spring 1
Q1: 3.9
Q2: 3.5 J
Q3: 3.8
Q4: 3.7

MW-11A
Q1: 0.2 J
Q2: 0.03 UJ
Q3: 0.16 J
Q4: 0.030 U

MW-17A
Q1: 2.2
Q2: 4.6
Q3: 6.1
Q4: 2.8

MW-2A
Q1: 0.19
Q2: 0.03 U
Q3: 0.18 J
Q4: 0.030 U

MW-16A
Q1: 0.9
Q2: 0.55 J
Q3: 1.2
Q4: 0.98

MW-8A
Q1: 0.19
Q2: 0.03 UJ
Q3: 0.19 J
Q4: 0.030 U

MW-10A
Q1: 1.5
Q2: 0.03 U
Q3: 46
Q4: 30 U

MW-13A
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-9A
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-6B
Q1: 1.2
Q2: 0.95
Q3: 1.0
Q4: 0.72

MW-15A
Q1: 0.13
Q2: 0.03 U
Q3: 0.12 J
Q4: 0.030 U

MW-W4
Q1: 0.67 J
Q2: 0.35 J
Q3: 0.51
Q4: 0.35

MW-W1
Q1: 0.41
Q2: 0.17 J
Q3: 0.53
Q4: 0.087 J

MW-W3
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-W2
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-14A
Q1: 5
Q2: 0.03 U
Q3: 3.0 J
Q4: 30 U

MW-12A
Q1: 1.7
Q2: 2.1
Q3: 3.6
Q4: 2.0

MW-4A
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-3A
Q1: Dry
Q2: Dry
Q3: 0.57 J
Q4: 0.29

RI-GW1
Q1: 0.77
Q2: 0.03 U
Q3: 1.2
Q4: 0.89

Legend

Unconsolidated Aquifer (UA) Well

MW-12A
1.7
Well Identification
Concentration

Spring/Pond/Wetland Water Sample

Screening Levels
4 mg/L MCL
0.96 mg/L MTCA Method B

MCL: Maximum Contaminants Level
MTCA: Model Toxics Control Act
NESI: North of the East Surface Impoundment Area
Concentrations in milligrams per liter (mg/L)
NS: Not Sampled

J: Estimated Concentration
U: Chemical was not detected. The associated value represents the method detection limit.
UJ: Chemical was not detected. Associated limit is estimated.
Q1: Quarter 1 (Winter 2017)
Q2: Quarter 2 (Spring 2017)
Q3: Quarter 3 (Summer 2017)
Q4: Quarter 4 (Fall 2017)

N
W E
S

0 500 1,000 2,000
Feet

Imagery Source: NAIP 2017

Figure 2-26
Concentrations for Fluoride In
Unconsolidated Aquifer (UA) Wells

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

R:\projects_2011\LockheedMartin_Goldendale\siteinvestigmaps\2018_ReportingFigure_2-27_MonitoringWells_Fluoride_Q1-4_BAU.mxd

IB-2
Q1: 0.56 J
Q2: 0.03 U
Q3: 0.93
Q4: 0.69

NESI Wetland
Q1: 20 J
Q2: NS
Q3: NS
Q4: NS

MW-1
Q1: NS
Q2: 0.03 U
Q3: 0.22
Q4: 0.22

IB-3
Q1: 0.31
Q2: 0.19 J
Q3: 0.26
Q4: 0.28

IB-2A
Q1: 13
Q2: 16 J
Q3: 14
Q4: 15

IB-4
Q1: 0.5
Q2: 0.23
Q3: 0.15 J
Q4: 0.28

IB-11
Q1: 0.68
Q2: 0.76
Q3: 0.73
Q4: 0.76

RI-MW7-BAU
Q1: 0.84
Q2: 0.79 J
Q3: 0.90 J
Q4: 0.54

RI-MW8-BAU
Q1: 9.8
Q2: 15 J
Q3: 11 J
Q4: 6.8

IB-12A
Q1: 4.4 J
Q2: 0.03 U
Q3: 4.0
Q4: 4.5

IB-1
Q1: 1.1
Q2: 0.67
Q3: 1.2
Q4: 0.80

RI-MW6-BAU
Q1: 3.2
Q2: 2.9
Q3: 4.1 J
Q4: 4.2

RI-MW5-BAU
Q1: 0.63
Q2: 0.03 U
Q3: 0.72
Q4: 0.34 J

IB-5A
Q1: 0.16
Q2: 0.03 U
Q3: 0.030 U
Q4: 0.17 J

IB-10
Q1: 0.2
Q2: 0.21
Q3: 0.046 J
Q4: 0.28

BAMW-3
Q1: 19
Q2: 23 J
Q3: 20 J
Q4: 17

RI-MW9-BAU
Q1: 0.87 J
Q2: 0.42 J
Q3: 0.84
Q4: 0.98

RI-MW11-BAU
Q1: 2.2
Q2: 1.9
Q3: 2.3 J
Q4: 2.4

RI-MW10-BAU
Q1: 1.2
Q2: 1.2 J
Q3: 1.6 J
Q4: 1.4

RI-MW13-BAU
Q1: 2.2
Q2: 2.4
Q3: 2.1 J
Q4: 1.8 J

IB-5AA
Q1: 0.14
Q2: 0.17 J
Q3: 0.044 J
Q4: 0.030 U

IB-6
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-2B
Q1: 0.18
Q2: 0.03 U
Q3: 0.19 J
Q4: 0.030 U

RI-MW14-BAU
Q1: 2.4
Q2: 2.7
Q3: 2.5 J
Q4: 2.1 J

IB-5
Q1: 0.25 J
Q2: 0.03 U
Q3: 0.053 J
Q4: 0.030 U

Stormwater Pond
Q1: 4.2 J
Q2: NS
Q3: NS
Q4: NS

IB-7
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-7B
Q1: 0.27
Q2: 0.03 U
Q3: 0.12 J
Q4: 0.030 U

RI-MW12-BAU
Q1: 1.3
Q2: 1
Q3: 1.2 J
Q4: 1.3 J

RI-MW2-BAU
Q1: 3.8
Q2: 3.4
Q3: 3.6
Q4: 3.4

Spring 1
Q1: 3.9
Q2: 3.5 J
Q3: 3.8
Q4: 3.7

MW-3B
Q1: 0.09 J
Q2: 0.03 UJ
Q3: 0.060
Q4: 0.030 UJ

RI-MW3-BAL
Q1: 0.094 J
Q2: 0.03 UJ
Q3: 0.73
Q4: 0.030 U

BAMW-1
Q1: 0.3
Q2: 0.11 J
Q3: 0.36
Q4: 0.053 J

RI-MW15-BAU
Q1: 2
Q2: 1.9
Q3: 1.6
Q4: 1.9

RI-MW16-BAU
Q1: 0.79 J
Q2: 0.59 J
Q3: 0.80 J
Q4: 0.43

MW-18
Q1: 0.08 J
Q2: 0.03 J
Q3: 0.097 J
Q4: 0.030 U

Legend

Uppermost Basalt Aquifer Well (BAU)

- BAU_1 - Shallower Water-bearing Zone
- BAU_2 - Deeper Water-bearing Zone

MW-12A
1.7
Well Identification
Concentration

- Spring/Pond/Wetland Water Sample

Screening Levels

- 4 mg/L MCL
- 0.96 mg/L MTCA Method B

MCL: Maximum Contaminants Level
MTCA: Model Toxics Control Act
NESI: North of the East Surface Impoundment Area
Concentrations in milligrams per liter (mg/L)
NS: Not Sampled

J: Estimated Concentration
U: Chemical was not detected. The associated value represents the method detection limit.
UJ: Chemical was not detected. Associated limit is estimated.
Q1: Quarter 1 (Winter 2017)
Q2: Quarter 2 (Spring 2017)
Q3: Quarter 3 (Summer 2017)
Q4: Quarter 4 (Fall 2017)

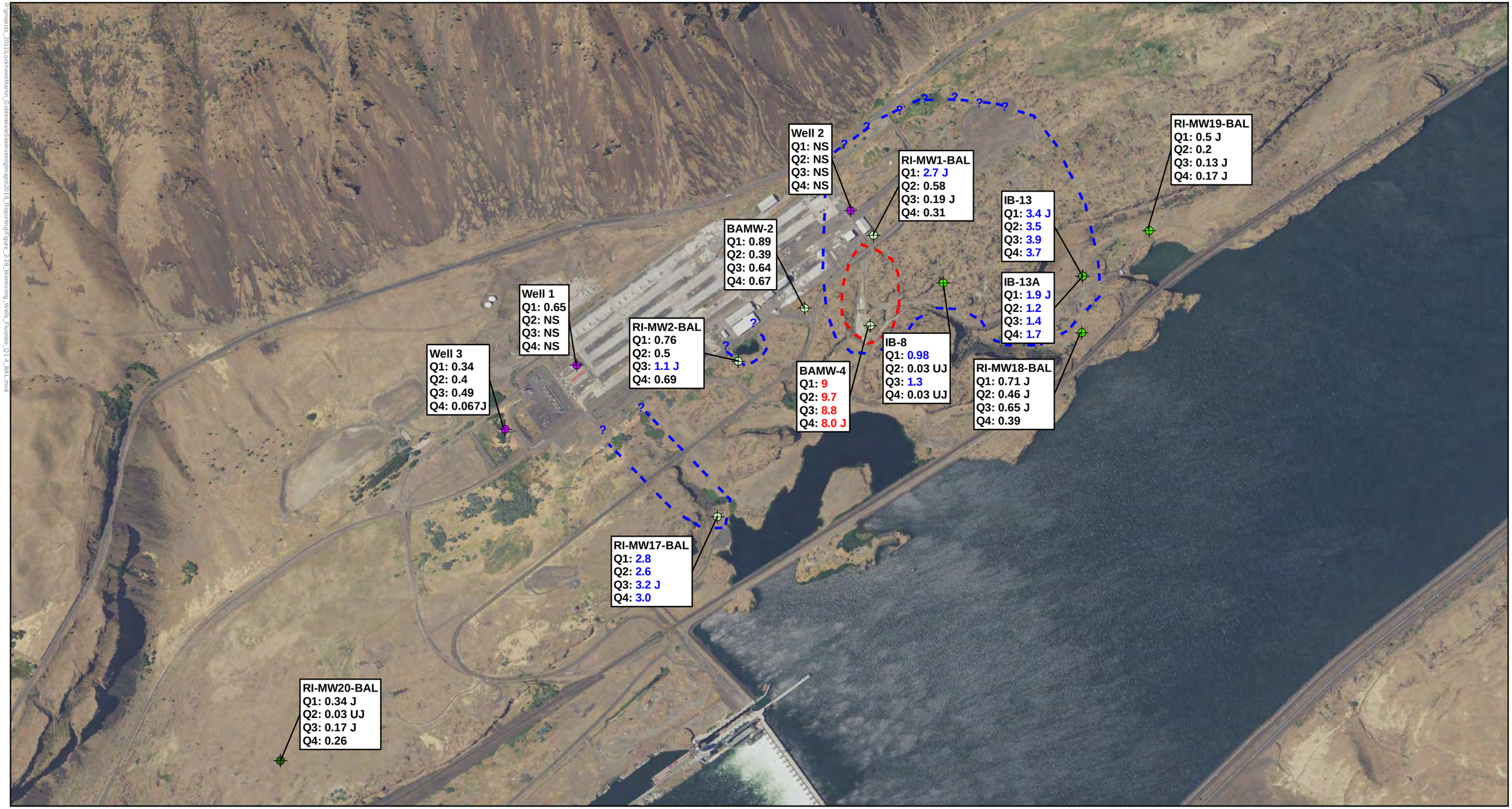
N
W E
S

0 500 1,000 2,000
Feet
Imagery Source: NAIP 2017

Figure 2-27
Concentrations for Fluoride In Uppermost Basalt Aquifer (BAU) Wells

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

R:\projects_2011\LockheedMartin_Goldendale\deliverysignmaps\2018_ReportingFigure_2-28_Monitoring_Wells_Fluoride_Q1-4_BAL.mxd



Legend

Lower Basalt Aquifer Well (BAL)

- BAL_1 - Shallower Water-bearing Zone
- BAL_2 - Deeper Water-bearing Zone
- BAL_3 - Deepest Water-bearing Zone

RI-MW20-BAL
0.34 J
Well Identification
Concentration

Production Well

Screening Levels

- 4 mg/L MCL
- 0.96 mg/L MTCA Method B

MCL: Maximum Contaminants Level
MTCA: Model Toxics Control Act
Concentrations in milligrams per liter (mg/L)
NS: Not Sampled

J: Estimated Concentration
UJ: Chemical was not detected. Associated limit is estimated.
Q1: Quarter 1 (Winter 2017)
Q2: Quarter 2 (Spring 2017)
Q3: Quarter 3 (Summer 2017)
Q4: Quarter 4 (Fall 2017)

N
W E
S

0 500 1,000 2,000
Feet
Imagery Source: NAIP 2017

Figure 2-28
Concentrations for Fluoride In Lower Basalt Aquifer (BAL) Wells

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

R:\projects_2011\LockheedMartin_Goldendale\siteinvestigation\gis\2018_Reporting\Figure_2-31_Monitoring_Wells_Sulfate_Q1-4_UA.mxd

NESI Wetland
Q1: 120
Q2: NS
Q3: NS
Q4: NS

MW-8
Q1: 48
Q2: 64
Q3: 36
Q4: 36

ESI-1
Q1: 43
Q2: 1,200
Q3: 1,800 J
Q4: 1,800

MW-10
Q1: 50
Q2: 460
Q3: 440 J
Q4: 700

MW-9
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

IB-9
Q1: 2,500
Q2: 1,600
Q3: 1,500
Q4: 15

MW-E7
Q1: 47 J
Q2: 69
Q3: 62
Q4: 60

MW-E8
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-E3
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-E4
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-E1A
Q1: 27
Q2: 23
Q3: 63
Q4: 72

RI-GW7
Q1: 17 J
Q2: 20
Q3: 43
Q4: 22 J

RI-GW5
Q1: 180
Q2: 190
Q3: 160
Q4: 170

RI-GW6
Q1: 4
Q2: 1.7
Q3: Dry
Q4: 16

RI-MW5-UA
Q1: 22
Q2: 32
Q3: 22
Q4: 24 J

RI-MW4-UA
Q1: 14
Q2: 12
Q3: 12
Q4: 13 J

RI-GW4A
Q1: 33
Q2: 26
Q3: 29 J
Q4: 30

RI-GW2A
Q1: 43
Q2: 46
Q3: 46
Q4: 48 J

MW-11A
Q1: 9.3
Q2: 9.7
Q3: 9.3
Q4: 10 J

MW-17A
Q1: 14
Q2: 15
Q3: 13
Q4: 16 J

MW-16A
Q1: 22
Q2: 23
Q3: 19
Q4: 20 J

MW-2A
Q1: 13
Q2: 11
Q3: 10
Q4: 11 J

MW-8A
Q1: 8.7
Q2: 9
Q3: 8.7
Q4: 9.8 J

MW-6B
Q1: 20
Q2: 20
Q3: 19
Q4: 21 J

MW-W4
Q1: 43 J
Q2: 54
Q3: 50
Q4: 54

Stormwater Pond
Q1: 100
Q2: NS
Q3: NS
Q4: NS

Spring 1
Q1: 64
Q2: 60
Q3: 40
Q4: 32

RI-GW9
Q1: 0.56 B
Q2: 7.3
Q3: 0.46 J
Q4: 8.1

RI-GW8
Q1: 32
Q2: 31
Q3: 39
Q4: 40

MW-10A
Q1: 3,900
Q2: 8,600
Q3: 7,900
Q4: 5,300

MW-15A
Q1: 140
Q2: 450
Q3: 160
Q4: 190 J

MW-13A
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-W1
Q1: 630
Q2: 170
Q3: 370
Q4: 610

MW-W3
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-14A
Q1: 1,600
Q2: 1,700
Q3: 2,400
Q4: 2,300

MW-9A
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-W2
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

MW-12A
Q1: 710
Q2: 680
Q3: 680
Q4: 750 J

MW-3A
Q1: Dry
Q2: Dry
Q3: 44
Q4: 44

RI-GW1
Q1: 1,100
Q2: 1,400
Q3: 1,000 J
Q4: 1,100

MW-4A
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

Legend

Unconsolidated Aquifer (UA) Well

MW-12A
710
Well Identification
Concentration

Spring/Pond/Wetland Water Sample

Screening Levels
250 mg/L Secondary MCL

MCL: Maximum Contaminants Level
J: Estimated Concentration
Concentrations in milligrams per liter (mg/L)

NS: Not Sampled
Q1: Quarter 1 (Winter 2017)
Q2: Quarter 2 (Spring 2017)
Q3: Quarter 3 (Summer 2017)
Q4: Quarter 4 (Fall 2017)

N
W E
S

0 500 1,000 2,000
Feet

Imagery Source: NAIP 2017

Figure 2-32
Concentrations for Sulfate In
Unconsolidated Aquifer (UA) Wells

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

R:\projects_2011\LockheedMartin_Goldendale\siteinvestigmaps\2018_ReportingFigure_2-33_MonitoringWells_Sulfate_Q1-4_BAU.mxd

NESI Wetland
Q1: 120
Q2: NS
Q3: NS
Q4: NS

IB-2
Q1: 550
Q2: 710
Q3: 610
Q4: 470

MW-1
Q1: NS
Q2: 11
Q3: 11
Q4: 13

IB-3
Q1: 18
Q2: 24
Q3: 17
Q4: 18

IB-4
Q1: 64
Q2: 53
Q3: 58
Q4: 55

IB-11
Q1: 83
Q2: 91
Q3: 87
Q4: 89

IB-1
Q1: 29
Q2: 59
Q3: 61 J
Q4: 58

IB-12A
Q1: 930
Q2: 2,200
Q3: 1,800 J
Q4: 2,500

IB-10
Q1: 250
Q2: 300
Q3: 280
Q4: 270

IB-5A
Q1: 1,000 J
Q2: 980
Q3: 1,100 J
Q4: 1,100

IB-5AA
Q1: 380
Q2: 440
Q3: 460 J
Q4: 460

IB-5
Q1: 480 J
Q2: 470
Q3: 550 J
Q4: 550

IB-2A
Q1: 38
Q2: 40
Q3: 35
Q4: 32

BAMW-3
Q1: 170
Q2: 160 J
Q3: 160
Q4: 180

IB-6
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

IB-7
Q1: Dry
Q2: Dry
Q3: Dry
Q4: Dry

RI-MW7-BAU
Q1: 210
Q2: 140
Q3: 170
Q4: 220 J

RI-MW8-BAU
Q1: 110
Q2: 89 J
Q3: 110
Q4: 120

RI-MW6-BAU
Q1: 93
Q2: 130
Q3: 120
Q4: 110

RI-MW5-BAU
Q1: 31
Q2: 21
Q3: 29
Q4: 28 J

RI-MW9-BAU
Q1: 40
Q2: 59
Q3: 52
Q4: 49

RI-MW10-BAU
Q1: 27
Q2: 27
Q3: 28
Q4: 32 J

RI-MW11-BAU
Q1: 90
Q2: 62
Q3: 59
Q4: 63

RI-MW12-BAU
Q1: 42
Q2: 69 J
Q3: 91
Q4: 68 J

Stormwater Pond
Q1: 100
Q2: NS
Q3: NS
Q4: NS

MW-2B
Q1: 12
Q2: 10
Q3: 10
Q4: 11 J

MW-7B
Q1: 140
Q2: 150
Q3: 140
Q4: 160

RI-MW13-BAU
Q1: 43
Q2: 42 J
Q3: 43
Q4: 43 J

RI-MW2-BAU
Q1: 39
Q2: 74
Q3: 41
Q4: 32

RI-MW16-BAU
Q1: 51 J
Q2: 53
Q3: 55
Q4: 53

RI-MW14-BAU
Q1: 44
Q2: 42
Q3: 43
Q4: 43 J

BAMW-1
Q1: 34
Q2: 30
Q3: 31
Q4: 33

RI-MW15-BAU
Q1: 120
Q2: 140 J
Q3: 130
Q4: 130

Spring 1
Q1: 64
Q2: 60
Q3: 40
Q4: 32

MW-3B
Q1: 1,800
Q2: 1,800
Q3: 1,600
Q4: 1,700

RI-MW3-BAL
Q1: 2,000
Q2: 2,100
Q3: 2,100
Q4: 2,000

MW-18
Q1: 1,400
Q2: 1,400
Q3: 1,300
Q4: 1,300

Legend

Uppermost Basalt Aquifer Well (BAU)

BAU_1 - Shallower Water-bearing Zone

BAU_2 - Deeper Water-bearing Zone

MW-18
1,400
Well Identification
Concentration

Spring/Pond/Wetland Water Sample

Screening Levels
250 mg/L Secondary MCL

MCL: Maximum Contaminants Level
J: Estimated Concentration
Concentrations in milligrams per liter (mg/L)

NS: Not Sampled
Q1: Quarter 1 (Winter 2017)
Q2: Quarter 2 (Spring 2017)
Q3: Quarter 3 (Summer 2017)
Q4: Quarter 4 (Fall 2017)

N
W E
S

0 500 1,000 2,000
Feet
Imagery Source: NAIP 2017

Figure 2-33
Concentrations for Sulfate In
Uppermost Basalt Aquifer (BAU) Wells

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

R:\projects_2011\LockheedMartin_Goldendale\siteinvestigmaps\2018_Reporting\Figure_2-34_Monitoring_Wells_Sulfate_Q1-4_BAL.mxd

Well 2
Q1: NS
Q2: NS
Q3: NS
Q4: NS

RI-MW1-BAL
Q1: 260
Q2: 310
Q3: 300
Q4: 300

IB-13
Q1: 380
Q2: 420 J
Q3: 440 J
Q4: 420

RI-MW19-BAL
Q1: 93
Q2: 87 J
Q3: 83
Q4: 75

BAMW-2
Q1: 230
Q2: 270
Q3: 220
Q4: 190

IB-8
Q1: 770
Q2: 970
Q3: 980
Q4: 1,000 J

IB-13A
Q1: 78
Q2: 310 J
Q3: 450 J
Q4: 290

Well 1
Q1: 96
Q2: NS
Q3: NS
Q4: NS

RI-MW2-BAL
Q1: 61
Q2: 68
Q3: 65
Q4: 58

BAMW-4
Q1: 250
Q2: 350
Q3: 340
Q4: 360 J

RI-MW18-BAL
Q1: 88
Q2: 85 J
Q3: 90
Q4: 90

Well 3
Q1: 20
Q2: NS
Q3: 17
Q4: 20

RI-MW17-BAL
Q1: 120
Q2: 150
Q3: 160
Q4: 160

RI-MW20-BAL
Q1: 340
Q2: 420
Q3: 450
Q4: 450

Legend

Lower Basalt Aquifer Well (BAL)

- BAL_1 - Shallower Water-bearing Zone
- BAL_2 - Deeper Water-bearing Zone
- BAL_3 - Deepest Water-bearing Zone

RI-MW20-BAL
340
Well Identification
Concentration

Production Well

Screening Levels
250 mg/L Secondary MCL

MCL: Maximum Contaminants Level
J: Estimated Concentration
Concentrations in milligrams per liter (mg/L)

NS: Not Sampled
Q1: Quarter 1 (Winter 2017)
Q2: Quarter 2 (Spring 2017)
Q3: Quarter 3 (Summer 2017)
Q4: Quarter 4 (Fall 2017)

N
W E
S

0 500 1,000 2,000
Feet
Imagery Source: NAIP 2017

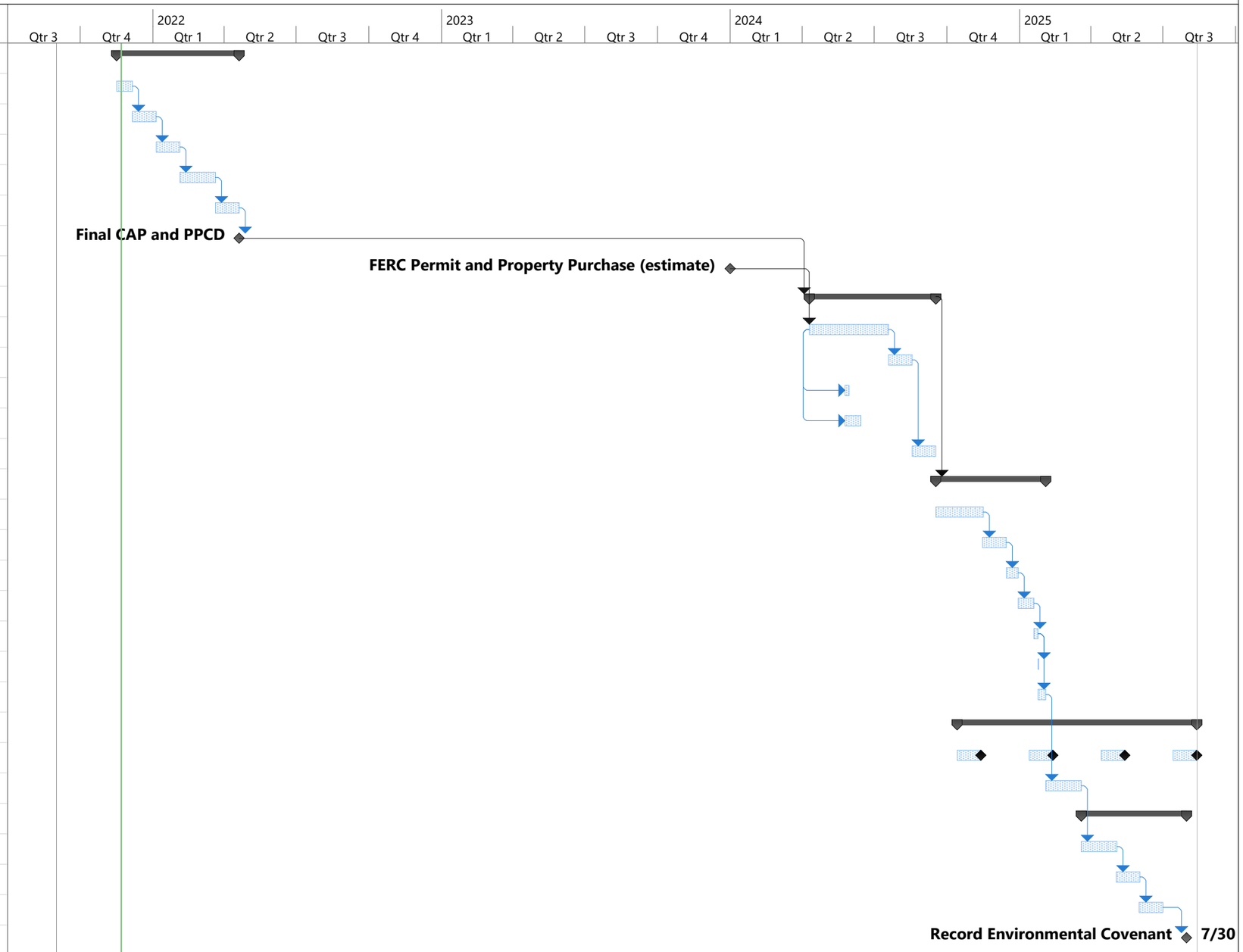
Figure 2-34
Concentrations for Sulfate In
Lower Basalt Aquifer (BAL) Wells

Columbia Gorge Aluminum Smelter Site
Goldendale, Washington

APPENDIX C SCHEDULE

Appendix C
Project Implementaion Schedule
Draft Cleanup Action Plan
Goldendale Energy Storage Project

ID	Task Name	Finish
1	**Cleanup Action Plan (WAC 173-340-380)**	**Wed 4/20/22**
2	Draft Cleaup Action Plan (WAC 173-340-380)	Mon 12/6/21
3	ECY review of draft cleanup action plan	Wed 1/5/22
4	Public participation plan (WAC 173-340-600)	Fri 2/4/22
5	Public comment period (WAC 173-340-600)	Mon 3/21/22
6	Negotiate PPCD	Wed 4/20/22
7	**Final CAP and PPCD**	Wed 4/20/22
8	**FERC Permit and Property Purchase (estimate)**	Mon 1/1/24
9	**Engineering and Design (WAC 173-340-400)**	**Mon 9/16/24**
10	Draft engineering and design	Thu 7/18/24
11	ECY review engineereing and design report	Sat 8/17/24
12	Health and safety plan (WAC 173-340-400)	Wed 5/29/24
13	Compliance monitoring plan (WAC 173-340-410)	Thu 6/13/24
14	Final engineereing and design report	Mon 9/16/24
15	**Cleanup Action Implementation**	**Sun 2/2/25**
16	Mobilization	Fri 11/15/24
17	Decommission monitoring wells	Sat 12/14/24
18	Install replacement monitoring wells	Sun 12/29/24
19	Excavation and disposal of WSI	Sat 1/18/25
20	Confirmation sampling	Thu 1/23/25
21	Additional excavation	Fri 1/24/25
22	Site grading	Sun 2/2/25
23	**Reporting**	**Tue 8/12/25**
24	**Quarterly Progress Reporting (during construction)**	**Tue 8/12/25**
29	**Construction Completion Report**	Wed 3/19/25
30	**Institutional Controls Report**	**Wed 7/30/25**
31	Draft Report	Sat 5/3/25
32	Ecology review of institutional controls report	Sun 6/1/25
33	Final institutional controls report	Mon 6/30/25
34	Record Environmental Covenant	Wed 7/30/25



Project: Goldendale Energy Storage Project
Date: Mon 11/22/21

Task Milestone Summary

The Applicant holds an option to purchase the Project area and will exercise the option after receiving applicable permits, expected in January 2024. All dates after January 2024 are esimates contingent on permitting.

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