November 29th, 2023

Pat Hallinan
Department of Ecology
Water Quality Program
4601 North Monroe
Spokane, WA 99205

Subject: NPDES Permit No. WA0045217 Kettle Falls Generating Station Renewal Application

Mr. Hallinan,
Avista is submitting this application for NPDES renewal to Ecology for the Kettle Falls Generating Station.

Three [3] EPA Application Forms and their required supporting documents for the above-referenced permit are attached as follows:

1. EPA Form 1
2. EPA Form 2C
3. EPA Form 2F

Please reach out to me if you have any questions, we appreciate your attention to this application.

Sincerely,

Josh LaPorte
Environmental Scientist
509-738-1510
Josh.LaPorte@avistacorp.com

cc. Darrell Soyars - Avista
Janna Loeppky - Avista
Shane Kostka - Landau
Carolyn Carlstrom - Landau

United States Environmental Protection Agency | Office of Water Washington, D.C. | EPA Form 3510-1 Revised March 2019

Water Permits Division

Application Form 1
General Information

NPDES Permitting Program

Note: All applicants to the National Pollutant Discharge Elimination System (NPDES) permits program, with the exception of publicly owned treatment works and other treatment works treating domestic sewage, must complete Form 1. Additionally, all applicants must complete one or more of the following forms: 2B, 2C, 2D, 2E, or 2F. To determine the specific forms you must complete, consult the "General Instructions" for this form.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

Form 1 NPDES

EPA

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

GENERAL INFORMATION

SECTION 1. ACTIVITIES REQUIRING AN NPDES PERMIT (40 CFR 122.21(f) and (f)(1))

Activities Requiring an NPDES Permit

1.1	Applicants ***Not Required*** to Submit Form 1		
1.1.1	Is the facility a new or existing **publicly owned treatment works**? If yes, STOP. Do NOT complete Form 1. Complete Form 2A. ☑ No	1.1.2	Is the facility a new or existing **treatment works treating domestic sewage**? If yes, STOP. Do NOT complete Form 1. Complete Form 2S. ☑ No
1.2	Applicants ***Required*** to Submit Form 1		
1.2.1	Is the facility a **concentrated animal feeding operation** or a **concentrated aquatic animal production facility**? ☐ Yes ➔ Complete Form 1 ***and*** Form 2B. ☑ No	1.2.2	Is the facility an **existing** manufacturing, commercial, mining, or silvicultural **facility** that **is currently discharging process wastewater**? ☑ Yes ➔ Complete Form 1 ***and*** Form 2C. ☐ No
1.2.3	Is the facility a **new** manufacturing, commercial, mining, or silvicultural **facility** that has **not yet commenced to discharge**? ☐ Yes ➔ Complete Form 1 ***and*** Form 2D. ☑ No	1.2.4	Is the facility a **new or existing** manufacturing, commercial, mining, or silvicultural **facility** that **discharges only nonprocess wastewater**? ☐ Yes ➔ Complete Form 1 ***and*** Form 2E. ☑ No
1.2.5	Is the facility a **new or existing facility** whose discharge is composed entirely of **stormwater associated with industrial activity** or whose discharge is composed of **both stormwater and non-stormwater**? ☑ Yes ➔ Complete Form 1 ***and*** Form 2F unless exempted by 40 CFR 122.26(b)(14)(x) or (b)(15). ☐ No		

SECTION 2. NAME, MAILING ADDRESS, AND LOCATION (40 CFR 122.21(f)(2))

Name, Mailing Address, and Location

2.1	Facility Name		
	Kettle Falls Generating Station		
2.2	EPA Identification Number		
	110008226712		
2.3	Facility Contact		
	Name (first and last): Patrick Lutskas	Title: Plant Manager	Phone number: (509) 738-1523
	Email address: Patrick.Lutskas@avistacorp.com		
2.4	Facility Mailing Address		
	Street or P.O. box: PO Box 609 1151 US-395 North		
	City or town: Kettle Falls	State: Washington	ZIP code: 99141

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

Name, Mailing Address, and Location Continued

2.5	Facility Location		
	Street, route number, or other specific identifier 1151 US-395 North		
	County name Stevens	County code (if known) 53065 (FIPS)	
	City or town Kettle Falls	State WA	ZIP code 99141

SECTION 3. SIC AND NAICS CODES (40 CFR 122.21(f)(3))

SIC and NAICS Codes

3.1	SIC Code(s)	Description (optional)
	4911	Electric Services

3.2	NAICS Code(s)	Description (optional)
	221117	Biomass electric power generation

SECTION 4. OPERATOR INFORMATION (40 CFR 122.21(f)(4))

Operator Information

4.1	Name of Operator
	Avista Corporation

4.2	Is the name you listed in Item 4.1 also the owner?
	☑ Yes ☐ No

4.3	Operator Status
	☐ Public—federal ☐ Public—state ☐ Other public (specify)_____ ☑ Private ☐ Other (specify) _____

4.4	Phone Number of Operator
	(509) 489-0500

Operator Information Continued

4.5	Operator Address		
	Street or P.O. Box 1411 East Mission Avenue		
	City or town Spokane	State Washington	ZIP code 99202
	Email address of operator		

SECTION 5. INDIAN LAND (40 CFR 122.21(f)(5))

Indian Land

5.1	Is the facility located on Indian Land?
	☐ Yes ☑ No

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

SECTION 6. EXISTING ENVIRONMENTAL PERMITS (40 CFR 122.21(f)(6))

Existing Environmental Permits

6.1 Existing Environmental Permits (check all that apply and print or type the corresponding permit number for each)

☑ NPDES (discharges to surface water) WA0045217	☐ RCRA (hazardous wastes)	☑ UIC (underground injection of fluids) 32566 (Diesel Remediation)
☑ PSD (air emissions) X80-11	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☑ Other (specify) 18AQ-E017 (AOP)

SECTION 7. MAP (40 CFR 122.21(f)(7))

Map

7.1 Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.)

☑ Yes ☐ No ☐ CAFO—Not Applicable (See requirements in Form 2B.)

SECTION 8. NATURE OF BUSINESS (40 CFR 122.21(f)(8))

Nature of Business

8.1 Describe the nature of your business.

The Kettle Falls Generating Station is a wood-waste fired steam-electric power plant operated by Avista Corporation. The facility source of process water is three onsite groundwater wells located adjacent to the Generating Station site (west of Peachcrest Road) as well as make-up and domestic water from the City of Kettle Falls. The Generating Station requires process water for the reverse osmosis/electro-deionization systems, ash handling system, the steam cycle, and other miscellaneous uses. The facility uses a circulating water system to meet the Generating Station's cooling needs. This system includes a conventional mechanical draft cooling tower. The Generating Station's wastewater treatment system includes two settling basins, a retention basin, and a mixing tank. The settling basins receive the boiler blowdown and miscellaneous flows from the process and boiler, RO reject, and any settled solids from the mixing tank. A 474,000-gallon concrete retention basin receives the settling basins overflow and cooling water blowdown and allows retention time for mixing, cooling, and reduction of residual free chlorine levels from the cooling tower blowdown. The mixing tank provides additional settling of solids and a recirculation capacity to the retention pond. Recirculation through the mixing tank continues until temperature, pH, and chlorine meet effluent limits, the flow is then diverted from the mixing tank to the outfall into Lake Roosevelt approximately 125 feet from the shoreline at a normal low water elevation of 1208 feet above mean sea level. Stormwater from the plant site flows through separate oil/water separators into one of two locations (north and south outfalls). These outfalls both discharge the treated stormwater to a roadside ditch (Peachcrest Road) west of the facility on Avista property. A culvert underneath the road then directs the drainage adjacent to a railway line. For the Hog fuel pile, the facility collects all runoff and applies this water back onto the fuel storage pile.

SECTION 9. COOLING WATER INTAKE STRUCTURES (40 CFR 122.21(f)(9))

Cooling Water Intake Structures

9.1 Does your facility use cooling water?

☑ Yes ☐ No ➔ SKIP to Item 10.1.

9.2 Identify the source of cooling water. (Note that facilities that use a cooling water intake structure as described at 40 CFR 125, Subparts I and J may have additional application requirements at 40 CFR 122.21(r). Consult with your NPDES permitting authority to determine what specific information needs to be submitted and when.)

Non-contact cooling water is supplied by the Peachcrest groundwater wells (Figure 1) installed in 2010, 2011 and 2018. All three wells tap into the same highly productive (up to 600gpm) sand and gravel aquifer with screens ranging from 270 to 300 below ground surface.

SECTION 10. VARIANCE REQUESTS (40 CFR 122.21(f)(10))

Variance Requests

10.1 Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(m)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)

- ☐ Fundamentally different factors (CWA Section 301(n))
- ☐ Water quality related effluent limitations (CWA Section 302(b)(2))
- ☐ Non-conventional pollutants (CWA Section 301(c) and (g))
- ☐ Thermal discharges (CWA Section 316(a))
- ☑ Not applicable

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

11.1 In Column 1 below, mark the sections of Form 1 that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.

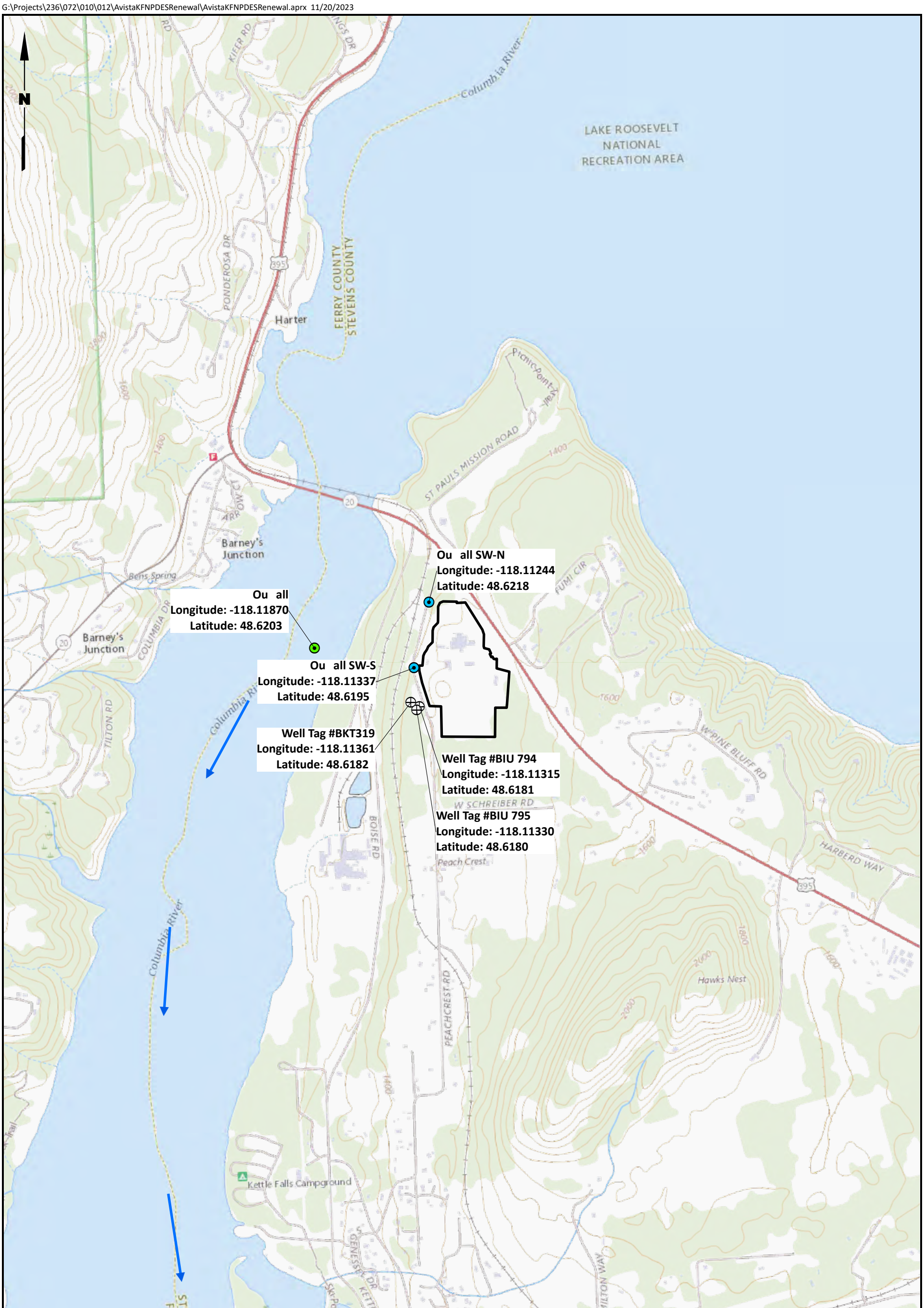
Column 1	Column 2
☑ Section 1: Activities Requiring an NPDES Permit	☐ w/ attachments
☑ Section 2: Name, Mailing Address, and Location	☐ w/ attachments
☑ Section 3: SIC Codes	☐ w/ attachments
☑ Section 4: Operator Information	☐ w/ attachments
☑ Section 5: Indian Land	☐ w/ attachments
☑ Section 6: Existing Environmental Permits	☐ w/ attachments
☑ Section 7: Map	☑ w/ topographic map ☐ w/ additional attachments
☑ Section 8: Nature of Business	☐ w/ attachments
☑ Section 9: Cooling Water Intake Structures	☐ w/ attachments
☑ Section 10: Variance Requests	☐ w/ attachments
☑ Section 11: Checklist and Certification Statement	☐ w/ attachments

11.2 Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Jason Thackston	SVP, Chief Strategy and Clean Energy Officer
Signature DocuSigned by: Jason Thackston EC91BFF9033645C...	Date signed Nov-27-2023 | 3:31 PM PST

G:\Projects\236\072\010\012\AvistaKFNPDESRenewal\AvistaKFNPDESRenewal.aprx 11/20/2023



Legend

- Ou all
- Stormwater Ou all
- Peachcrest Wells (intake)
- Site Boundry
- River Current Directio

0 1,200 2,400

Scale in Feet

Note

1. Black and white reproduction of this olor original may reduce its e ecti eness and lead to incorrect interpretation

Data Source: USGS.

LANDAU ASSOCIATES

Kettle alls Generating S atio Avista Utiliti Kettle alls, Washington	NPDES Permit Site Map	Figure 1

ATTACHMENT A

Air Permits

WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 NORTH MONROE
SPOKANE, WASHINGTON 99205-1295

IN THE MATTER OF THE COMPLIANCE BY AVISTA CORPORATION KETTLE FALLS GENERATING STATION LOCATED IN KETTLE FALLS, WA 1151 Highway 395 North, Kettle Falls, WA 99141 with Section 70.94.161 RCW, Operating Permits for Air Contaminant Sources, and the applicable rules and regulations of the Department of Ecology	)))))))))	AIR OPERATING PERMIT No. 18AQ-E017 **FINAL PERMIT**

To: Avista Corporation
1411 East Mission
Spokane, WA 99220-3727

Issuance Date: December 28, 2018
Effective Date: January 1, 2019
Expiration Date: December 31, 2023

Responsible Official: Mr. Dennis Vermillion

Legal Authority: This Air Operating Permit is issued under the authority and provisions of the Federal Clean Air Act (FCAA), (42 U.S.C. 7401, et seq.), the Washington Clean Air Act, Chapter 70.94 Revised Code of Washington (RCW) and the Operating Permit Regulation, Chapter 173-401 Washington Administrative Code (WAC).

Hereinafter, Avista Corporation, Kettle Falls Generating Station is called the permittee. The permittee is required to comply with the provisions contained within this permit.

The Renewal Air Operating Permit, per WAC 173-401-710(1), is DATED this 28th of December, 2018.

PREPARED BY:

ANDREW RONALD KRUSE
STATE OF WASHINGTON
55044
REGISTERED
PROFESSIONAL ENGINEER

Andy Kruse, P.E.
Commercial/Industrial Unit
Air Quality Program
Eastern Regional Office

APPROVED BY:

David T. Knight
Section Manager
Air Quality Program
Eastern Regional Office

Table of Contents

LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
BTU	British Thermal Units
°C	Degrees Celsius
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf	Dry Standard Cubic Foot
dscf/m	Dry Standard Cubic Foot per minute
Ecology	Washington State Department of Ecology
E.I.T.	Engineer in Training
EPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit
FCAA	Federal Clean Air Act
FDCP	Fugitive Dust Control Plan
ft^3	Cubic foot
gr/dscf	Grain per dry standard cubic foot
hr	Hour
MMBtu	Million British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
MVAC	Motor Vehicle Air Conditioner
N_2	Nitrogen gas
NOC	Notice of Construction
NO_x	Oxides of Nitrogen
NSPS	New Source Performance Standard
O_2	Oxygen
O&M	Operation & Maintenance
P.E.	Professional Engineer
PM	Particulate Matter
PM-10	Particulate Matter with aerodynamic diameter ≤ 10 micrometers
ppm	Parts per million
QIP	Quality Improvement Plan
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
scfm	Standard Cubic Feet per Minute
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPD	Tons Per Day
TPY	Tons Per Year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
yr	Year

All information required for submittal throughout this permit, is to be submitted to Ecology, EPA, or both as specified by the applicable requirement, at the following addresses:

Air Quality Program
Department of Ecology
4601 North Monroe
Spokane, Washington 99205-1295

US EPA Region 10 Administrator
c/o Part 70 Permit Coordinator
1200 Sixth Avenue, Suite 155
Seattle, Washington 98101

1. STANDARD CONDITIONS

1.1 PERMIT SHIELD

1.1.1 Compliance with the terms and conditions of this permit shall be deemed compliance with those applicable requirements that are specifically included and identified in this permit as of the date of permit issuance.

1.1.2 The permit shield shall not apply to any insignificant emissions unit or activity designated under WAC 173-401-530.

[WAC 173-401-530(3), 9/16/02, 2/3/16 (S)], [WAC 173-401-640(1), 9/16/02, 2/3/16 (S)]

1.2 SEVERABILITY

If any provision of this permit is held to be invalid, all unaffected provisions of the permit shall remain in effect and be enforceable.

[WAC 173-401-620(2)(h), 9/16/02, 2/3/16 (S)], [RCW 70.94.905, 2017 (S)]

1.3 PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

[WAC 173-401-620(2)(d), 9/16/02, 2/3/16 (S)]

1.4 EMISSIONS TRADING

No permit revision shall be required, under any approved economic incentives, marketable permits, emission trading, and other similar programs or processes for changes that are provided for in this permit.

[WAC 173-401-625, 9/16/02, 2/3/16 (S)]

1.5 ENFORCEABILITY

All terms and conditions of the permit are enforceable by the EPA and citizens unless specifically designated as state-only (S) enforceable.

[WAC 173-401-620(2)(g), 9/16/02, 2/3/16 (S)]

1.6 GENERAL OBLIGATION

Nothing in this permit shall alter or affect the following:

1.6.1 The provisions of section 303 of the FCAA (emergency orders), including the authority of EPA under that section.

1.6.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

1.6.3 The applicable requirements of the acid rain program, consistent with Section 408(a) of the FCAA.

1.6.4 The ability of EPA to obtain information from a source pursuant to section 114 of the FCAA.

1.6.5 The ability of Ecology to establish or revise requirements for the use of reasonably available control technology (RACT) as provided in Chapter 252, Laws of 1993.

[WAC 173-401-640(4), 9/16/02, 2/3/16 (S)]

1.7 Reasonably Available Control Technology (RACT)

Emission standards and other requirements contained in rules or regulatory orders in effect at the time of operating permit issuance or renewal shall be considered RACT for the purpose of permit issuance or renewal. RACT determinations under Section 8, Chapter 252, Laws of 1993 shall be incorporated into an operating permit as provided in WAC 173-401-730.

[WAC 173-401-605(3), 9/16/02, 2/3/16 (S)], [RCW 70.94.154, 2017 (S)]

1.8 Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

[WAC 173-401-620(2)(b), 9/16/02, 2/3/16 (S)]

1.9 Permit Actions

This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[WAC 173-401-620(2)(c), 9/16/02, 2/3/16 (S)]

1.10 Permit Continuation

This permit and all terms and conditions contained therein, including any permit shield provided under WAC 173-401-640, shall not expire until the renewal permit has been issued or denied if a timely and complete application has been submitted. An application shield granted pursuant to WAC 173-401-705(2) shall remain in effect until the renewal permit has been issued or denied if a timely and complete application has been submitted.

[WAC 173-401-620(2)(j), 9/16/02, 2/3/16 (S)]

1.11 Permit Appeals

You have a right to appeal this permit to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this permit. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Address and Location Information:

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW, STE 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

[RCW 70.94.221, 12/12/17 (S)]

This provision for appeal in this section is separate from and additional to any federal rights to petition and review under Section 505(b) of the FCAA.

[WAC 173-401-620(2)(i), 9/16/02, 02/3/16 (S)]

1.12 Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Chapter 70.94 RCW and, for federally enforceable provisions, a violation of the FCAA. Such violations are grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.

[WAC 173-401-620(2)(a), 9/16/02, 2/3/16 (S)], [Order No. DE 95AQ-E131 Fourth Amendment, Issued 1/6/17, Approval Condition 8.5], [Order No. PSD-X80-11, Issued 07/28/80, Approval Condition 5], [Order No. 02AQER-3519 First Amendment, Issued 05/23/2011, Approval Conditions 9.6, 9.7]

1.13 Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow Ecology, or an authorized representative to perform the following:

1.13.1 Enter upon the permittee's premises where a Chapter 401 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

1.13.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

1.13.3 Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

1.13.4 As authorized by WAC 173-400-105 and the FCCA, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.

[WAC 173-401-630(2), 9/16/02, 2/3/16 (S), RCW 70.94.200, 2017 (S), Order No. DE 95AQ-E131 Fourth Amendment, Issued 1/6/17, Approval Condition 8.2]

1.13.4.1 Ecology may require the permittee to conduct stack testing and/or ambient air monitoring and report the results to Ecology.

1.13.4.2 Ecology may conduct or require a test be conducted using approved methods from 40 CFR parts 51, 60, 61 and 63 (in effect on July 1, 2012), or Ecology's Source Test Manual – Procedures for Compliance Testing. The permittee shall be required to provide platform and sampling ports. Ecology shall be allowed to obtain a sample from any emissions unit. The permittee shall be given the opportunity to observe the sampling and to obtain a sample at the same time.

[WAC 173-400-105(2),(4), 10/6/16, 5/31/16 (S)]

1.13.5 Ecology may conduct source tests and require access to records, books, files, and other information specific to the control, recovery, or release of pollutants regulated under 40 CFR Parts 61, 62, 63 and 65, as applicable, in order to determine the status of compliance of sources of these contaminants and to carry out its enforcement responsibilities.

[WAC 173-400-075(2), 5/31/16 (S)]

1.13.6 No person shall obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties.

[RCW 70.94.200, 2017 (S)]

1.13.7 Nothing in this condition shall limit the ability of EPA to inspect or enter the premises of the permittee under Section 114 or other provisions of the FCAA.

[40 CFR 60.8(e), 07/01/17]

1.14 Permit Fees

The permittee shall pay fees as a condition of this permit in accordance with Ecology's fee schedule. Failure to pay fees in a timely fashion shall subject the permittee to civil and criminal penalties as prescribed in Chapter 70.94 RCW. Ecology may revoke this permit if the permit fees are not paid per WAC 173-401-930(3).

[WAC 173-401-620(2)(f), 930(3), 9/16/02, 2/3/16 (S)], [RCW 70.94.162(1), 2017 (S)]

1.15 Duty to Provide Information

The permittee shall furnish to Ecology, within a reasonable time, any information that Ecology may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to Ecology copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to Ecology along with a claim of confidentiality. Ecology shall maintain confidentiality of such information in accordance with RCW 70.94.205.

[WAC 173-401-620(2)(e), 9/16/02, 2/3/16 (S)]

No person shall render inaccurate any required monitoring device or method.

[WAC 173-400-105(8), 10/6/16, 5/31/16 (S)]

1.16 Excess Emissions Due to an Emergency

The permittee may seek to establish that noncompliance with a technology-based[1] emission limitation under this permit was due to an emergency.[2] To do so, the permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:

1.16.1 An emergency occurred and that the permittee can identify the cause(s) of the emergency.

1.16.2 The permitted facility was being properly operated at the time of the emergency.

1.16.3 During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit.

1.16.4 The permittee submitted notice of the emergency to Ecology within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[WAC 173-401-645, 9/16/02, 2/3/16 (S)]

1.17 Unavoidable Excess Emissions

Excess emissions determined to be unavoidable under the procedures and criteria in WAC 173-400-107 shall be excused and not subject to penalty.

1.17.1 The permittee shall have the burden of proving to Ecology that excess emissions were unavoidable. This demonstration shall be a condition to obtaining relief under 1.17.2, 1.17.3, or 1.17.4.

1.17.2 Excess emissions due to startup or shutdown conditions shall be considered unavoidable provided the source reports as required under Condition 1.17.5 and adequately demonstrates that the excess emissions could not have been prevented through careful planning and design and if a bypass of control equipment occurs, that such bypass is necessary to prevent loss of life, personal injury, or severe property damage.

1.17.3 Excess emissions due to scheduled maintenance shall be considered unavoidable if the source reports as required under Condition 1.17.5 and adequately demonstrates that the excess emissions could not have been avoided through reasonable design, better scheduling for maintenance or through better operation and maintenance practices.

---

1 Technology-based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain a health based air quality standard.

2 An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of this source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes this source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

1.17.4 Excess emissions due to upsets shall be considered unavoidable provided the source reports as required under Condition 1.17.5 and adequately demonstrates that:

1.17.4.1 The event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition.

1.17.4.2 The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance.

1.17.4.3 The operator took immediate and appropriate corrective action in a manner consistent with good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action, including slowing or shutting down the emission unit as necessary to minimize emissions, when the operator knew or should have known that an emission standard or permit condition was being exceeded.

1.17.5 Excess emissions which represent a potential threat to human health or safety or which the owner or operator of the source believes to be unavoidable shall be reported to Ecology as soon as possible. Other excess emissions shall be reported within 30 days after the end of the month during which the event occurred or as part of the routine emission monitoring reports. Upon request by Ecology, the owner or operator of the source shall submit a full written report including the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.

[WAC 173-400-107(3), 6/2/95, 5/31/16 (S)]

1.18 Record Keeping

1.18.1 The permittee shall keep records of required monitoring information that includes, where applicable, the following:

1.18.1.1 The date, place, and time of the sampling or measurements.

1.18.1.2 The date(s) analyses were performed.

1.18.1.3 The company or entity that performed the analysis.

1.18.1.4 The analytical techniques or methods used.

1.18.1.5 The results of such analyses.

1.18.1.6 The operating conditions as existing at the time of sampling or measurement.

[WAC 173-401-615(2)(a), 9/16/02, 2/3/16 (S)]

1.18.2 The permittee shall keep records describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[WAC 173-401-615(2)(b), 9/16/02, 2/3/16 (S)]

1.18.3 The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all

calibration and maintenance records and all original strip-chart recordings from continuous monitoring instrumentation, and copies of all reports required by this permit.

[WAC 173-401-615(2)(c), 9/16/02, 2/3/16 (S)]

1.19 Reporting

1.19.1 Deviation Reports - The permittee shall report deviations from permit conditions, including those attributable to upset conditions as defined in this permit, and include the following information: the time the deviation occurred, the duration of the deviation, the magnitude of the deviation in relation to the applicable limit, the probable cause of the deviation, and any corrective actions or preventive measures taken. Such deviations shall be reported "promptly" to Ecology at the address included in this permit.For deviations which represent a potential threat to human health or safety, "prompt" means as soon as possible, but in no case later than 12 hours after the deviation is discovered. For deviations which the source believes to be unavoidable, "prompt" means as soon as possible. For deviations which represent a potential threat to human health or safety or which the source believes to be unavoidable, the initial report shall contain all available information regarding the deviation and may be submitted via e-mail or fax to the appropriate Ecology personnel. No later than 30 days after the end of each month, the permittee shall submit a report describing other deviations that were discovered that month or stating that no other deviations were discovered. Upon request by Ecology, the permittee shall submit a full written report including further details regarding the known causes, the corrective actions taken, and the preventative measures to be taken to minimize or eliminate the chance of recurrence. The source shall maintain a contemporaneous record of all deviations.

[WAC 173-401-615(3)(b), 9/16/02, 2/3/16 (S)], [WAC 173-400-107, 6/2/95, 5/31/16 (S)], [40 CFR 60.49b(h), 07/01/17], [WAC 173-401-630(1), 9/16/02, 2/3/16 (S)]

1.19.2 Semi-Annual Monitoring Reports - The permittee shall submit semi-annual reports which include monitoring, recordkeeping, and/or reporting information that is required to be submitted every six months. Six-month periods shall be twice each calendar year from January 1st through June 30th, and from July 1st through December 31st. Semi-annual monitoring reports shall be due no later than 45 days following the end of each six month period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with Condition 1.20.

[WAC 173-401-615(3)(a), 9/16/02, 2/3/16 (S)]

1.19.3 Compliance Certifications - The permittee shall submit a certification of compliance with permit terms and conditions at least once per calendar year. All certifications shall be submitted no later than 45 days following the end of the certification period. Ecology may require that compliance certifications be submitted more frequently for those emission units not in compliance with permit terms and conditions, or where more frequent certification is specified in the applicable requirement.

[WAC 173-401-630(3), 9/16/02, 2/3/16 (S)]

1.19.3.1 The certification shall describe and include the following:

1.19.3.1.1 The permit term or condition that is the basis of the certification,

1.19.3.1.2 The current compliance status,

1.19.3.1.3 Whether compliance was continuous or intermittent, and

1.19.3.1.4 The methods used for determining compliance, currently and over the reporting period consistent with WAC 173-401-615(3)(a).

[WAC 173-401-630(3), 9/16/02, 2/3/16 (S)]

1.19.3.2 All compliance certifications shall be submitted to Ecology and EPA Region 10 at the respective addresses included in this permit.

[WAC 173-401-630(5), 9/16/02, 2/3/16 (S)]

1.19.3.3 Where permit conditions do not require testing, monitoring, recordkeeping and reporting for insignificant emission units or activities, the permittee may certify continuous compliance if there are not observed, documented, or know instances of noncompliance during the reporting period.

1.19.3.4 Where permit conditions require testing, monitoring, recordkeeping or reporting for insignificant emission units or activities, the permittee may certify continuous compliance when the testing, monitoring, or recordkeeping required by the permit revealed no violations during the period, and there were no observed, documented or known instances of noncompliance during the reporting period.

[WAC 173-401-530(2)(d), 9/16/02, 2/3/16 (S)]

1.19.3.5 All compliance certifications shall include certification by a responsible official in accordance with Condition 1.20.

1.19.3.6 For the purpose of submitting compliance certifications, or establishing whether or not a person has violated or is in violation of any requirement of this permit, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.

[40 CFR 52.33(a), 7/1/17], [40 CFR 60.11(g), 7/1/17]

1.19.4 Emissions Exceedance Reports - In the event of any occurrence of criteria pollutant (PM, CO, NO_X, SO_2 and hydrocarbon (HC)) emissions from the main hog fuel boiler which exceed the limits set forth in Conditions 2.3.2 through 2.3.8 of this permit, the permittee shall provide notification to both Ecology and EPA no later than 10 days from the date that the exceedances took place. Such reports shall include, as a minimum, an estimate of the resultant emissions, and a narrative report of the cause, duration, and steps taken to correct the problem and avoid a recurrence. Any exceedances reported under this section need not be reported again under Condition 1.19.2.

[Order No. PSD-X80-11, Issued 07/28/80, Approval Condition 3]

1.19.5 Emissions Inventory - The permittee shall submit an inventory of actual emissions from the source for each calendar year. The inventory shall include segmented stack and fugitive emissions of particulate matter, PM_{10}, $PM_{2.5}$, sulfur dioxide, oxides of nitrogen, carbon monoxide, total reduced sulfur compounds (TRS), fluorides, lead, volatile organic compounds (VOCs), ammonia, and other contaminants. In addition, data elements listed in Table 2a to Appendix A of Subpart A of 40 CFR 51 must also be reported. The emissions inventory for each calendar year shall be submitted no later than **April 15th** of the following year. The permittee shall maintain records of information necessary to substantiate any reported emissions, consistent with the averaging times for the applicable standards. Emission estimates used in the inventory may be based on the most recent published EPA emission factors for a source category, or other information available to the permittee, whichever is the better estimate.

Emissions inventories shall be reported to Ecology in the Washington Emissions Inventory Repository System, and a certification statement with supporting data shall be provided to Ecology at the address included in this permit unless or until Ecology specifies another system or format.

[WAC 173-400-105(1), 10/6/16, 5/31/16 (S)]

1.19.6 Greenhouse Gas Reporting - If the permittee emits 10,000 metric tons of greenhouse gases (GHGs) or more per calendar year, GHGs are required to be reported to Ecology. (Note: WAC 173-441-030(5) details reporting requirements for facilities which are subject to the requirements, but fall below reporting thresholds). All requests, notifications, and communications to Ecology regarding GHGs, other than submittal of the annual GHG report, shall be submitted to: Greenhouse Gas Report, Air Quality Program, Department of Ecology, PO Box 47600, Olympia, WA 98504-7600. Annual GHG reports shall be submitted through Ecology's GHG Reporting page at:

https://ecology.wa.gov/Regulations-Permits/Reporting-requirements/Climate-change-emissions-reporting/Greenhouse-gas-reporting

Reports must meet the requirements of WAC 173-441-050 and include the annual emissions of the GHGs listed in WAC 173-441-040 from source categories listed in WAC 173-441-120. The annual GHG report must be submitted electronically in accordance with WAC 173-441-050 and WAC 173-441-060, in a format specified by Ecology. The GHG report is due to Ecology by **October 31st** of each year for the previous calendar year, unless the facility is also required to submit a GHG report to EPA, then the GHG report is due to Ecology **March 31st** of each year for GHG emissions from the previous calendar year.

If the facility emits 10,000 metric tons of GHGs or more per calendar year, the permittee must develop a written GHG monitoring plan. The plan shall be revised, as needed, to reflect changes in processes, monitoring instruction, and quality assurance procedures; or to improve procedures for the maintenance and repair of monitoring systems to reduce the frequency of monitoring equipment downtime.

[Chapter 173-441 WAC, 9/15/16 (S)]

1.20 CERTIFICATION

Reports, test data, monitoring data, notifications, certifications, and applications (including requests for renewal) shall be submitted to Ecology at the address included in this permit.

Any document submitted to Ecology pursuant to this permit shall contain certification of truth, accuracy, and completeness by a responsible official. All certifications shall state that *"based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete"*. The permittee shall promptly, upon discovery, report to Ecology any material error or omission in these records, reports, plans or other documents.

[WAC 173-401-520, 9/16/02, 2/3/16 (S)], [WAC 173-401-500(6), 9/16/02, 2/3/16 (S)], [40 CFR 60.4(a), (b), 7/1/17]

1.21 Permit Renewal and Expiration

This permit is issued for a fixed term of five years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted. All terms and conditions of the permit shall remain in effect after the permit itself expires if a timely and complete permit application was submitted. This allowance shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit by the deadline specified in writing by Ecology, any additional information identified as being needed to process the application.

A renewal application is due (one and a half years before expire). A complete renewal application is due no later than (one year before expire). The application shall be sent to Ecology at the address included in this permit.

[WAC 173-401-610, 710, 9/16/02, 2/3/16 (S)]

1.22 Duty to Supplement or Correct Application

The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

[WAC 173-401-500(6), 9/16/02, 2/3/16 (S)]

1.23 Administrative Permit Amendments

1.23.1 An administrative permit amendment is a permit revision that:

1.23.1.1 Allows for a change in ownership or operational control of this source where the permitting authority has determined that no other change in this permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to Ecology.

1.23.1.2 Corrects typographical errors within the permit.

1.23.1.3 Identifies a change in the name, address, or phone number of any person identified in the permit, or provides for a similar minor administrative change at the source.

1.23.1.4 Requires more frequent monitoring or reporting by the permittee.

1.23.1.5 Incorporates into the permit the terms, conditions, and provisions from orders approving notice of construction applications processed under an EPA-approved program, provide that such a program meets procedural

requirements substantially equivalent to the requirements of WAC 173-401-700, 173-401-725, and 173-401-800 that would be applicable to the change if it were subject to review as a permit modification, and compliance requirements substantially equivalent to those contained in WAC 173-401-600 through 173-401-650.

1.23.2 The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

1.23.3 The permitting authority shall, upon taking final action granting a request for an administrative permit amendment, allow coverage by the permit shield in WAC 173-401-640 for administrative permit amendments made pursuant to condition 1.23.1.5 above.

[WAC 173-401-720, 9/16/02, 2/3/16 (S)]

1.24 REOPENING FOR CAUSE

1.24.1 Ecology will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:

1.24.1.1 Additional requirements under the FCAA become applicable to a major source three or more years prior to the expiration date of this permit. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit, unless the original permit or any of its terms and conditions have been extended pursuant to WAC 173-401-620(2)(j).

1.24.1.2 Ecology or the Administrator determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

1.24.1.3 Ecology or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

1.24.2 Proceedings to reopen and issue this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

1.24.3 Reopening shall not be initiated before a notice of intent to reopen is provided to the permittee by Ecology at least 30 days in advance of the date that this permit is to be reopened, except that Ecology may provide a shorter time period in the case of an emergency.

[WAC 173-401-730, 9/16/02, 2/3/16 (S)]

1.25 OFF-PERMIT CHANGES

The permittee is allowed to make certain changes that are not specifically addressed or prohibited by this permit without a permit revision. All such changes must meet the following conditions:

1.25.1 The proposed changes shall not weaken the enforceability of any existing permit conditions.

1.25.2 Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition.

1.25.3 Before or contemporaneously with making the permit change, the permittee must provide written notice to Ecology and EPA Region 10 at the respective addresses included in this permit. Such written notice shall describe each such change, including the date, any change in emissions or pollutants emitted, and any applicable requirements that would apply as a result of the change.

1.25.4 The change shall not qualify for the permit shield under Condition 1.1.

1.25.5 The permittee shall record all changes that result in emissions of any regulated air pollutant subject to any applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. The record shall reside at the permitted facility.

1.25.6 A source making a change under this section shall comply with the preconstruction review requirements established pursuant to Condition 1.27.

[WAC 173-401-724, 9/16/02, 2/3/16 (S)]

1.26 CHANGES NOT REQUIRING PERMIT REVISIONS

1.26.1 *Section 502(b)(10) changes.* The permittee is authorized to make section 502(b)(10) changes, as defined in WAC 173-401-200(28), without a permit revision, providing the conditions included below are met. The permit shield as described in Condition 1.1 shall not apply to any change made pursuant to this paragraph.

1.26.1.1 The proposed changes are not Title I (FCAA) modifications;

1.26.1.2 The proposed changes do not result in emissions which exceed those allowable under the permit, whether expressed as a rate of emissions, or in total emissions;

1.26.1.3 The proposed changes do not alter permit terms that are necessary to enforce limitation on emissions from units covered by the permit;

1.26.1.4 The facility provides Ecology and EPA with written notification at least seven days prior to making the proposed changes except that written notification of a change made in response to an emergency shall be provided as soon as possible after the event;

1.26.1.4.1 The written notification shall include a brief description of the change within the permitted facility, the date on which the chance will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

1.26.2 *Changes related to Emissions trading under an emissions cap.* Pursuant to Condition 1.26.1, the permittee is authorized to trade increases and decreases in emission in the permitted facility, where the Washington state implementation plan provides for such emissions trades without requiring a permit revision. This provision is available in those cases where the permit does not already provide for such emissions trading. Such changes shall be subject to the following:

1.26.2.1 The written notification required under Condition 1.26.1.4 shall include such information as may be required by the provision in the Washington SIP authorizing the emissions trade, including at a minimum, when the proposed change will occur, a description of each such change, any change in emissions, the permit requirements with which the source will comply using the emissions trading provisions of the Washington SIP, and the pollutants emitted subject to the emissions trade. The notice shall also refer to the provisions with which the source will comply in the applicable implementation plan and that provide for the emissions trade. The notification shall state how any increases or decreases in emissions will comply with the terms and conditions of the permit. (The permit shield described under Condition 1.1 shall extend to terms and conditions that allow such increases and decreases.)

1.26.2.2 The permit shield described in Condition 1.1 shall not extend to any change made under this paragraph. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the applicable implementation plan authorizing the emissions trade.

1.26.2.3 Upon the request of the permit applicant, Ecology shall issue permits that contain terms and conditions, including all terms required under WAC 173-401-600 through 173-401-630 to determine compliance, allowing for the trading of emissions increases and decreases in the chapter 173-401 WAC source solely for the purpose of complying with a federally enforceable emissions cap that is established in the permit independent of otherwise applicable requirements. The permit applicant shall include in its application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The emissions trading provision shall not be applied to any emissions units for which emission are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit shall also require compliance with all applicable requirements.

1.26.2.4 A source making a change under this section shall comply with applicable preconstruction review requirements established pursuant to Condition 1.27.

1.26.2.5 No permit revision shall be required, under any approved economic incentives, marketable permits, and other similar programs or processes for changes that are provided for in this permit such as emissions trading.

[WAC 173-401-722, 9/16/02, 2/3/16 (S)], [WAC 173-401-620(2)(g), 9/16/02, 2/3/16 (S)]

1.27 New Source Review

The permittee shall not construct new sources or make modifications required to be reviewed under WAC 173-400-110, WAC 173-400-113, WAC 173-400-560, WAC 173-400-720, WAC 173-400-820, or Chapter 173-460 WAC before the permittee obtains written final approval from Ecology in accordance with those regulations, pays the

appropriate fees required by WAC 173-455-120, and pays the cost of public notice described in WAC 173-400-171.

[RCW 70.94.152(1), 2017 (S)], [WAC 173-400-110, 9/29/16, 5/31/16 (S)], [WAC 173-400-113, 4/29/15, 5/31/16 (S)], [WAC 173-400-171, 10/6/16, 5/31/16 (S)], [WAC 173-400-560, 5/31/16 (S)], [WAC 173-400-720, 10/6/16, 5/31/16 (S)], [WAC 173-400-820, 11/7/14, 5/31/16 (S)], [WAC 173-455-120, 11/30/12 (S)], [WAC 173-460, 5/20/09 (S)]

1.28 Replacement or Substantial Alteration of Emission Control Technology

Prior to replacing or substantially altering emission control technology subject to review under WAC 173-400-114, the permittee shall file for and obtain approval from Ecology and pay the appropriate fees required by WAC 173-455-100(4) prior to commencing construction.

[WAC 173-400-114, 5/31/16 (S)], [WAC 173-455-100(4), 11/30/12 (S)], [RCW 70.94.153, 2017 (S)]

1.29 Federal Chlorofluorocarbons Requirements – Title VI of the FCAA

1.29.1 The permittee shall comply with the following standards for recycling and emissions reductions pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B.

1.29.1.1 Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156.

1.29.1.2 Equipment used during the maintenance, service, repair or disposal must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

1.29.1.3 Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

1.29.1.4 Persons disposing of small appliances, motor vehicle air conditioners, and MVAC-like appliances must comply with recordkeeping requirements pursuant to 40 CFR 82.166. ("MVAC-like appliance" is defined at 40 CFR 82.152.)

1.29.1.5 Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156.

1.29.1.6 Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added. The owner/operator must keep records of refrigerant purchased and added to such appliances in cases where owners add their own refrigerant. Such records should indicate the date(s) when refrigerant is added pursuant to 40 CFR 82.166.

1.29.1.7 Persons conducting maintenance, service, repair, or disposal of appliances must follow the prohibitions pursuant to 40 CFR 82.154.

1.29.1.8 Persons performing maintenance, service, repair, or disposal of appliances must certify to the EPA that such person has acquired certified recovery of recycling equipment pursuant to 40 CFR 82.162.

1.29.2 If the permittee manufactures, transforms, imports, or exports a Class I or Class II substance, the permittee is subject to all the requirements as specified in 40 CFR 82, Subpart A – Production and Consumption Controls.

1.29.3 If the permittee performs a service on monitor (fleet) vehicles and when this service involves ozone depleting substance refrigerant in the MVAC, the permittee is subject to all applicable requirements as specified in 40 CFR 82, Subpart B – Servicing of Motor Vehicle Air Conditioners.

1.29.4 The permittee shall be allowed to switch from any ozone depleting substance to any alternative that is listed in the Significant New Alternative Program promulgated pursuant to 40 CFR 82, Subpart G – Significant New Alternative Policy Program.

[RCW 70.94.970, 2017 (S)], [40 CFR 82, 7/1/17]

1.30 Demolition and Renovation (Asbestos)

Prior to, during, and after conducting any activity to which 40 CFR 61, Subpart M – National Emission Standard for Asbestos applies, the permittee shall comply with the requirements of that rule. Such activities include demolition, renovation, asbestos stripping or removal, installing or reinstalling insulation, manufacturing of fabricating certain items, spraying of certain materials, constructing roadways of certain materials, or disposal.

[WAC 173-400-075(1), 5/31/16 (S)], [40 CFR 61, Subpart M, 7/1/17]

1.31 Non-road Engines

Prior to installation or operation of a non-road engine, as defined in WAC 173-400-030(56), the permittee shall meet the requirements of WAC 173-400-035. If the non-road engine(s) has a cumulative maximum rated brake horsepower greater than 500, a notification of intent to operate will be submitted to Ecology. If the non-road engine(s) has a cumulative maximum rated break horsepower greater than 2,000, the permittee will not operate the engine(s) unless Ecology issues written approval to operate.

[WAC 173-400-035, 5/31/16 (S)]

1.32 Operational Flexibility

1.32.1 In the event that an emission unit is not operated during a period equal to or greater than the monitoring period designated, no monitoring is required. Recordkeeping and reporting must note the reason why and length of time that the emission unit was not operated.

1.32.1 The permittee did not propose any further alternative operating scenarios.

[WAC 173-401-650, 9/16/02, 2/3/16 (S)]

1.33 Compliance Schedules

1.33.1 The permittee shall continue to comply with applicable requirements with which it is currently in compliance. The permittee shall meet applicable requirements on a timely basis that become effective during the permit term.

[WAC 173-401-510(2)(h)(iii)(A), 9/16/02, 2/3/16 (S)], [WAC 173-401-510(2)(h)(iii)(B), 9/16/02, 2/3/16 (S)]

2 APPLICABLE REQUIREMENTS

Until this permit expires, is modified or revoked, this permittee is authorized to operate the processes outlined in Sections 2.1 through 2.4. These processes are subject to the conditions included in Sections 2.1, through 2.4, to the MRRR's listed in Section 3. Monitoring, Recordkeeping, and Reporting Requirements, and to other terms and conditions specified in this permit.

The column entitled **Description** in each table contains only a summary/paraphrase of the condition, emission standard or work practice. The condition, emission standard, or work practice itself is the enforceable requirement and should be referenced for actual language.

Testing Requirements
Although there are many conditions with no on-going testing requirements, Ecology retains the authority to conduct or require that testing be conducted at the facility with respect to these conditions per WAC 173-400-105(4). Identification of the appropriate test method is necessary to make emission limits fully enforceable. Where the underlying applicable requirement does not specify the test method, Ecology has done so in this permit.
[WAC 173-401-615(1)(a), 9/16/02, 2/3/16 (S)], [WAC 173-401-630(1), 9/16/02, 2/3/16 (S)], [WAC 173-400-105(4), 10/6/16, 5/31/16 (S)]

2.1 SECTION 1, FACILITY WIDE

This section is applicable and enforceable with respect to all significant emission units source wide, including those emission units in Sections 2.2 through 2.4. Condition numbers denoted with an asterisk indicate that streamlining of a less stringent requirement has taken place and is described in section 12.0 of the Statement of Basis.

TABLE 2.1

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.1.1	WAC 173-400-040(2) 10/6/16	F	Visible emissions shall not exceed 20% opacity for more than three minutes in any one hour	RM 9A	**5M**
	WAC 173-400-040(2) 5/31/16	S			
2.1.2	WAC 173-400-060 10/6/16	F	General process units are required to meet all applicable provisions of WAC 173-400-040 and emissions of particulate material from any operation shall not exceed 0.1 grain/dscf of exhaust gas	RM 5	**5M**
	WAC 173-400-060 5/31/16	S			
2.1.3	WAC 173-400-040(3) 5/31/16	S	Particulate matter shall not be deposited beyond the property in sufficient quantity to interfere unreasonably with the use and enjoyment of other's property	None	**3M**

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.1.4	WAC 173-400-040(4)(a), WAC 173-400-040 (9)(a) 10/6/16 WAC 173-400-040(4)(a), WAC 173-400-040 (9)(a) 5/31/16	F S	The source shall perform maintenance to minimize emissions and take reasonable precautions to prevent fugitive dust from becoming airborne		**3M**
2.1.5	WAC 173-400-040(4)(a), (9)(a) 5/31/16	S	Fugitive dust control measures shall be taken to prevent fugitive emissions		**5M**
2.1.6	WAC 173-400-040(5) 5/31/16	S	Any producer of an odor which may unreasonably interfere with any other property owner's use and enjoyment of his property must reduce these odors to a reasonable minimum	None	**3M**
2.1.7	WAC 173-400-040(6) 10/6/16 WAC 173-400-040(6) 5/31/16	F S	No person shall cause or permit the emission of any air contaminant if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business	None	**3M**
2.1.8	WAC 173-400-040(8) 10/6/16 WAC 173-400-040(8) 5/31/16 40 CFR 60.12	F S F	No person shall conceal or mask an emission of an air contaminant	None	**1M**
2.1.9	WAC 173-400-200(2) 10/3/14 WAC 173-400-200(2) 5/31/16	F S	No source may use dispersion techniques or excess stack height to meet ambient air quality standards or PSD increment limitations	None	**1M**
2.1.10	WAC 173-400-205 6/2/95 WAC 173-400-205 5/31/16	F S	Varying the rate of emission of a pollutant according to atmospheric conditions is prohibited, except as directed according to air pollution episode regulations	None	**1M**
2.1.11	RCW 70.94.040 2017	S	Causing air pollution in violation of Chapter 70.94 RCW is unlawful	None	**1M**
2.1.12	Chapter 173-425 WAC – Restriction on Open Burning	F	No open burning is allowed on site unless authorized by Ecology	None	**2M**

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.1.13	WAC 173-400-040(1) 10/6/16	F	All emissions units are required to use RACT	None	**1M**
	WAC 173-400-040(1) 5/31/16 (RCW 70.94.154(1))	S			

2.2 SECTION 2, WOOD WASTE COLLECTION AND TRANSPORT SYSTEM

The Wood Waste Collection and Transport System and all sources of air emissions associated with the processes are subject to those conditions, emission standards, and work practices included in Section 1. "Standard Conditions", Section 2.1 "Section 1 Facility Wide Requirements" and the associated Monitoring Recordkeeping and Reporting Requirements in Section 3.

2.3 SECTION 3, HOG FUEL BOILER

TABLE 2.3

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.3.1	Order No.DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 3	F	Opacity shall be < 10% (averaged over a six minute time interval as measured by COMS)	RM 9	**8M, 10M, 12M**
	PSD-X80-11 Issued 07/28/80 Approval Condition 1	F			
2.3.2	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	F	PM ≤ 21.1 lbs/hr and ≤ 90 TPY	RM 1-5, and 202	**7M, 8M, 9M, 14M**
	40 CFR 60.8(a), (b), (c), (d), (f), 7/1/17	F			
2.3.3	PSD-X80-11 Issued 07/28/80 Approval Condition 1	F	PM emissions shall not exceed 0.02 grains per dscf @ 12 % CO_2	RM's 1-5	**7M, 8M, 9M, 14M**
2.3.4	40 CFR 60.43b(c)(1), (g), 60.46b(a), 7/1/17	F	PM ≤ 0.1 lb/MMBTU heat input – standard shall apply at all times except startup, shutdown, or malfunction	RM 1-5, and 202	**7M, 8M, 9M, 14M**
	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 4.4				
2.3.5	WAC 173-400-040 (6, 1st ¶) 10/6/16	F	SO_2 ≤ 1000 ppm @ 7% O_2 (Sixty minute average)	RM 6	**7M, 8M**
	WAC 173-400-040(7) 5/31/16	S			

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.3.6	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1 PSD-X80-11; EPA Modification Issued 11/23/94	F	CO ≤ 1,088 lb/hr and CO ≤ 4,635 TPY	RM 10	**7M, 8M**
2.3.7	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1 PSD-X80-11; EPA Modification Issued 11/23/94	F	NO_X ≤ 142 lb/hr and NO_X ≤ 540 TPY	RM 7E	**7M, 8M**
	PSD-X80-11 Issued 07/28/80 Approval Condition 2	F	Emissions of any pollutant regulated under the Federal Clean Air Act will be less than 250 tons per year, except NO_X, CO & Hydrocarbons.		
2.3.8	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	F	HC ≤ 55 lb/hr and HC ≤ 210 TPY	RM 25A	**7M, 8M**
2.3.9	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	F	Lead ≤ 0.01 TPY	RM 12	**6M**
2.3.10	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Acetaldehyde ≤ 1.1 TPY		**8M**
2.3.11	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Acrolein ≤ 0.0002 lbs/hr and Acrolein ≤ 1.7 lbs/yr		**8M**
2.3.12	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Benzene ≤ 0.764 lbs/hr and Benzene ≤ 6,509 lbs/yr		**8M**
2.3.13	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Formaldehyde ≤ 0.4750 lbs/hr and Formaldehyde ≤ 4,047 lbs/yr		**8M**
2.3.14	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Hydrogen Chloride ≤ 0.4810 lbs/hr and Hydrogen Chloride ≤ 4,098 lbs/yr		**8M**
2.3.15	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Styrene ≤ 0.0198 lbs/hr and Styrene ≤ 169 lbs/yr		**8M**
2.3.16	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 1	S	Toluene ≤ 0.020 lbs/hr and Toluene ≤ 170 lbs/yr		**8M**

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.3.17	Order No. DE 95AQ-E13 4th Amendment, 1/6/17, Approval Condition 1	S	All other Hazardous Air Pollutants shall not exceed their corresponding emission factor listed in AP-42, Chapters 1.6 *Wood Residue Combustion in Boilers*, 9/03, and 1.4 *Natural Gas Combustion*, 7/98		**6M**
2.3.18	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 2	F	PM emissions from the hog fuel boiler shall be controlled by a 70% efficient multi-clone followed by a 99% efficient ESP		**1M**
2.3.19	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 4.1, 6.1 PSD-X80-11 Issued 07/28/80 Approval Condition 6b 40 CFR 60.49b(d), (o), 7/1/17	F F F	Annual plant operation shall not exceed 8,520 hrs and record operating hours, wood waste consumption and natural gas consumption		**11M**
2.3.20	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 4.2, 6.1	F	The hog fuel boiler shall only be fired on wood waste fuel or natural gas. Annual fuel consumption shall be limited to 724,200 tons wood waste and 610,001,000 cubic feet of natural gas		**11M**
2.3.21	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 4.3	F	The boiler natural gas firing capacity shall not exceed 250 million BTU per hour.		**11M**
2.3.22	WAC 173-400-070(2)(b) 10/6/16 WAC 173-400-070(2)(b) 5/31/16 40 CFR 60.11(d), 7/1/17	F S F	All hog fuel boilers shall utilize RACT and shall be operated and maintained to minimize emissions		**2M**
2.3.23	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Conditions 8.4, 8.5 PSD-X80-11 Issued 07/28/80 Approval Condition 5	F F	The boiler and all associated equipment shall be operated in a manner consistent with the O&M manual and NOC and PSD applications		**4M**

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.3.24	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 8.3	F	Approval Order and O&M Manual shall be in close proximity and accessible to the operators of the plant		**2M**
2.3.25	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 5	F	O&M manual shall be followed and kept updated		**13M**
2.3.26	40 CFR 60.7(a)(4), 7/1/17	F	Any modification to the boilers or their operating procedures inconsistent with the NOC application shall be submitted to Ecology 60 days before such modification		**17M**
2.3.27	Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 8.1	F	Order No. DE 95AQ-E131 4th Amendment becomes void if operation is discontinued for 18 months		**1M**
2.3.28	40 CFR 64.7(b) 7/1/17	F	The owner or operator shall maintain the monitoring equipment, including but not limited to, maintaining necessary parts for routine repairs of the equipment		**2M**
2.3.29	40 CFR 63.11201(b), 63.11205(a), 63.11223(b), 63.11225(b), 63.11225(c), 63.11225(d) 7/1/17	F	At all times the permittee must operate and maintain the hog fuel boiler in a manner consistent with safety and good air pollution control practices for minimizing emissions		**19M**
2.3.30	40 CFR 63.11196(3), 63.11201, 63.11214 7/1/17	F	The hog fuel boiler must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment was completed on April 24, 2014, that meets the energy assessment requirements specified in 40 CFR 63.11201. If the permittee operates under and energy management program compatible with ISO 50001, that includes the hog fuel boiler, satisfies the energy assessment as well.		**20M**

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.3.31	40 CFR 63.11201(b), 63.11225(1), 63.11225(a)(4), 63.11225(a) 7/1/17	F	The permittee shall submit all initial notifications which apply to the hog fuel boiler as specified by 40 CFR 63 Subpart JJJJJJ		**21M**

2.4 SECTION 4, NATURAL GAS COMBUSTION TURBINE

TABLE 2.4

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.4.1	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 4.3	F	Opacity shall not exceed 5%, averaged over a six minute period	RM 9	**16M**
2.4.2	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 4.4	F	PM emissions shall not exceed 0.63 lbs/hour and 2.8 tons/year (filterable + condensable portions)	RM 5 and 202	**7M, 15M**
2.4.3	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 4.1 40 CFR 60.8(a), (b), (c), 60.8(d), (f), 60.332(c), 60.335(b), 7/1/17	F F	NO_X emissions shall be ≤ 25.0 ppmvd @ 15% O_2 (3-hr average) or ≤ 8.90 lbs/hr or ≤ 38.9 tons per year	RM 20	**7M, 15M**
2.4.4	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 4.2	F	CO emissions shall be ≤ 30.0 ppmvd @ 15 % O_2 (1-hr average) or ≤ 16.90 lbs/hr or ≤ 74.0 tons per year	RM 10	**7M, 15M**
2.4.5	Order No. 02AQER-3519 Issued 05/23/11 Approval Conditions 3.3, 4.5 40 CFR 60.333(a), (b), 60.334(b)(2), (c)(2), 60.335(b), 7/1/17	F F	Exhaust gases shall contain ≤ 0.015 % SO_2 by volume @ 15% O_2, and fuels with sulfur content greater than 0.8% by weight shall not be combusted	RM 6	**16M**
2.4.6	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 2.1, 2.2	F	Annual operation of 8,760 hours permitted, combustion of pipeline quality natural gas only	None	**16M**

2.4.7	40 CFR 60.11(d), 7/1/17	F	Good combustion control will be utilized in order to minimize emissions at all times, and exhaust stack shall be at least 50 feet in height	None	**1M**
2.4.8	Order No. 02AQER-3519 Issued 05/23/11 Approval Conditions 2.3	F	Emissions of nitrogen oxides will be controlled by a Solo NO_x combustor	None	**1M**
2.4.9	Order No. 02AQER-3519 Issued 05/23/11 Approval Conditions 2.1, 9.6 40 CFR 60.7(a)(4), 7/1/17	F F	Any modification to plant or operating procedures shall be reported to Ecology 60 days prior to such modification	None	**17M**
2.4.10	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 9.4	F	Approval Order and O&M Manual shall be in the working vicinity and available to employees in direct operation of the turbine and duct burner	None	**1M**
2.4.11	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 9.5 40 CFR 60.11(d) 7/1/17	F F	Operation of equipment shall be conducted in a manner consistent with good air pollution control practice for minimizing emissions as well as with the NOC application and O&M Manual	None	**4M**
2.4.12	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 9.2	F	Order No. 02AQER-3519 becomes void if combustion turbine and duct burner installation is not commenced within 18 months, or if subsequent operation is discontinued for 18 months	None	**1M**
2.4.13	Order No. 02AQER-3519 Issued 05/23/11 Approval Condition 4.1	F	Any indication of exceedances of the NO_X limit shall be investigated and corrected within 48 hours	None	**1M**
2.4.14	Order No. 02AQER-3519 Issued 05/23/11 Approval Conditions 6	F	O&M manual shall be kept updated	None	**18M**

2.5 SECTION 5, 80 HP DIESEL FIRE PUMP

TABLE 2.5

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.5.1	40 CFR 63, Subpart ZZZZ, §63.6603(a), 2017	F	Management practices for Combustion Ignition (CI) engines	None	**22M**
2.5.2	40 CFR 63, Subpart ZZZZ, §63.6625, 2017	F	Installation of a non-resettable hour meter and minimized idle time at start-up	None	**22M**
2.5.3	40 CFR 63, Subpart ZZZZ, §63.6640, 2017	F	Demonstration of continuous compliance with the operating requirements and limitations	None	**22M**
2.5.4	40 CFR 63, Subpart ZZZZ, §63.6655, 2017	F	Recordkeeping for emergency stationary RICE	None	**22M**
2.5.5	40 CFR 63, Subpart ZZZZ, Table 2d, 2017	F	Operation during an emergency and it is not possible to shut down the engine in order to perform management practice requirements.	None	**22M**

2.6 SECTION 6, 335 HP DIESEL GENERATOR

TABLE 2.6

Condition Number	Condition, Emission Standard, or Work Practice	Enforceability (Federal = F) (State = S)	Description	Testing	MRRR Reference
2.6.1	40 CFR 60, Subpart IIII, §60.4200, 2017	F	Management practices for Combustion Ignition (CI) engines	None	**23M**
2.6.2	40 CFR 60, Subpart IIII, §60.4209(a), 2017	F	Installation of a non-resettable hour meter and minimized idle time at start-up	None	**23M**
2.6.3	40 CFR 60, Subpart IIII, §60.4211, 2017	F	Demonstration of continuous compliance with the operating requirements and limitations	None	**23M**
2.6.4	40 CFR 60, Subpart IIII, §60.4212, 2017	F	Recordkeeping for emergency stationary CI ICE	None	**23M**
2.6.5	40 CFR 60, Subpart IIII, §60.4207, 2017	F	Use of diesel fuel that meets requirements of 40 CFR 80.510(b)	None	**23M**
2.6.6	40 CFR 60, Subpart IIII, §60.4214, 2017	F	Operation during an emergency and it is not possible to shut down the engine in order to perform management practice requirements.	None	**23M**

3. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (MRRR)

[WAC 173-401-630(1)], [WAC 173-401-615(1)(b), (c)]

GENERAL

1M. The permittee shall conscientiously monitor site operations and promptly report any deviations.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

2M. At least once every 12 months, the permittee shall review actual operations and any other relevant information to determine if facility operations are being conducted in accordance with each specific requirement.

The permittee shall maintain records that include the date such reviews occur, the name of the person conducting the review, the information reviewed, summary information on any deviations identified and date and time when corrective action was initiated and completed.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

3M. The permittee shall maintain records of all complaints received. Ecology shall be notified within three working days of receipt of any complaints. The permittee shall address and respond to all complaints within three working days of receipt of the complaint. The recordkeeping shall include the following with regard to the complaint and the associated deviation:

1) A record of all written complaints, complaints received by telephone or complaints received in person.
2) Time, date, and duration of the deviation.
3) Cause of the deviation.
4) Estimate of excess emissions and magnitude of deviation.
5) Corrective action taken, and the results of such action.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

4M. At least once every 12 months, the permittee shall perform a complete review of the Operation and Maintenance manuals and permit application materials (Notice of Construction, PSD) for the referenced unit and associated equipment. The purpose of this review shall be to verify that the emission unit and associated equipment is being operated in accordance with the documents stated above and with good air pollution control practices in mind.

The permittee shall maintain records that include the date such reviews occur as well as the name of the person conducting the review and each document or operational practice reviewed. Upon discovery that any equipment is being operated in a manner inconsistent with any of the above mentioned documents, the permittee shall initiate corrective action within two business days. All such discoveries shall be reported to Ecology as required by Standard Condition 1.19.2 of this permit.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

5M. The following shall apply generally, facility wide:

Monitoring – At least once per month, as well as any time visible emissions are observed, the permittee shall perform complete walk-around surveys for the purpose of determining the presence of visible emissions throughout the facility site. The surveys shall be conducted while the facility is in operation, and shall include observation for any visible emissions, including fugitive emissions, regardless of the source.

Recordkeeping – Information for each survey indicating the date the survey was performed, the name of the person performing the survey, the weather at the time of the survey, an indication of whether any visible emissions were observed, a description of the cause of the visible emissions, the corrective action taken, and the results of such action.

Reporting – Monthly reporting of deviations shall be performed as described in Standard Condition 1.19.2, as well as annual certification of compliance as described in Standard Condition 1.19.4. Any monthly deviation reports documenting visible emissions observed shall include the time, date and duration of the deviation, a description of the cause of the visible emissions, the corrective action taken, and the results of the corrective action.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

6M. Semi-Annually – As part of the semi-annual monitoring report, the permittee shall submit parametric monitoring data for parameters that are used to calculate emissions. This may include actual fuel usage, actual hours of operation, actual steam production, etc. All hourly emissions reporting shall be calculated and expressed as the daily average hourly rate.

Annually – As part of the annual emissions inventory submittal required under Standard Condition 1.19.5, emissions shall be quantified by multiplying the appropriate recorded operating parameter (fuel usage, hours of operation, steam production, etc..) by an emission factor derived from the most recent source testing. All hourly emissions reporting shall be calculated and expressed as the daily average hourly rate. If test-derived factors are unavailable, use the most recent emission factor published by USEPA. In the event that the most recent published data provides a range of emission factors, the calculation shall be performed using the most conservative factor within the provided range. Use of less conservative emission factors may be used only upon written approval by Ecology. In the event that USEPA emission factors are either inappropriate or unavailable, the permittee shall propose an alternative emission factor (or emission estimation method) that may be used upon written approval by Ecology.

Calculations should be adjusted for percent oxygen as required by the applicable requirement and should indicate pollutant emission rate and concentration in the same units as the limit(s) specified in the applicable requirement(s). The emission inventory submittal shall include a statement clearly indicating the emission factor that is being used, justification for the use of the emission factor, clear identification of all operating parameters used in the calculation method, and an example of the calculation method used.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

7M. Source testing as referenced shall be conducted at least once every five years.

Semi-Annually – As part of the semi-annual monitoring report, the permittee shall submit parametric monitoring data for parameters that are used to calculate emissions. This may include actual fuel usage, actual hours of operation, actual steam production, etc. All hourly emissions reporting shall be calculated and expressed as the daily average hourly rate.

Annually – As part of the annual emissions inventory submittal required under Standard Condition 1.19.5, emissions shall be quantified by multiplying the appropriate recorded operating parameter (fuel usage, hours of operation, steam production, etc..) by an emission factor derived from the most recent source testing. All hourly emissions reporting shall be calculated and expressed as the daily average hourly rate.

Calculations should be adjusted for percent oxygen or percent carbon dioxide as required by the applicable requirement and should indicate pollutant emission rate and concentration in the same units as the limit(s) specified in the applicable requirement(s). The emission inventory submittal shall include a statement clearly indicating the emission factor that is being used, justification for the use of the emission factor, clear identification of all operating parameters used in the calculation method, and an example of the calculation method used.

{Note – For purposes of estimating emissions from the main hog fuel boiler resulting from natural gas firing, **6M** may be utilized to allow emission estimation using AP-42 emission factors.}

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

MAIN HOG FUEL BOILER

8M. Periodic performance testing shall be conducted. The following conditions shall apply to all testing:

1) The boiler shall be tested every five years, for visible emissions, NO_X, HC, and PM, using 40 CFR Part 60, Appendix A, methods 1-5, 7E, 9, 10, and 25A (as propane), and 40 CFR Part 51, Appendix M, method 202.

2) The boiler shall be tested every 10 years, for acrolein, acetaldehyde, benzene, formaldehyde, hydrogen chloride, styrene, and toluene, using EPA Compendium Method TO-15, SW-846 method 0011, and 40 CFR Part 60, Appendix A, method 26A.

3) Alternate test methods may be proposed by the Permittee in writing and approved by Ecology in writing, in advance of testing.

4) All testing shall consist of three runs, be conducted within 90 percent of maximum production rate, and be reflective of normal source operation.

5) Periodic performance testing shall be conducted. Testing shall be performed by an independent testing firm.

6) Testing shall be performed by an independent testing firm. A test plan, including a description of the methods proposed, shall be submitted for Ecology approval at least 30 days prior to any performance testing. The permittee shall notify Ecology as soon as possible if any planned testing is

cancelled or rescheduled. A written report of results shall be submitted to Ecology within 60 days after performance testing is conducted.

7) Sampling ports and platforms for performance testing must be provided by the Permittee, Adequate and safe access to the test ports must be provided.

[Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 7]

9M. Monitoring, Recordkeeping, and Reporting as required by 40 CFR 64 – CAM shall be subject to the following general conditions:

1) The owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emission unit is operating, with the following qualifications:

a) Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement.

b) The owner or operator shall use all data collected during all other periods in assessing the operation of the control device and associated control system.

c) "Monitoring malfunction" is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 64.7(c), 7/1/17], [40 CFR 64.7(a), 7/1/17]

2) Semi-annual CAM monitoring reports shall include the following:

a) Summary information on the number, duration, and cause (including unknown cause, if applicable) of deviations or violations, as applicable, and the corrective actions taken.

b) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks).

c) A description of any actions taken during the reporting period to implement any QIP's in effect.

[40 CFR 64.9(a), 7/1/17]

3) The following conditions shall apply to all CAM recordkeeping:

a) The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan(s) required as well as any activities undertaken to implement a quality improvement plan, and any other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

b) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks,

or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 CFR 64.9(b), 7/1/17]

10M. Monitoring – Visible emission shall be monitored using a Continuous Opacity Monitoring System (COMS) which meeting all provisions of Title 40, CFR Part 60, Appendix B, *Performance Specification 1 – Specifications and Test Procedures for Opacity Continuous Emissions Monitoring Systems in Stationary Sources*, and shall be operated according to quality assurance procedures conforming to *EPA 340/1-86-010, Recommended Quality Assurance Procedures for Opacity Continuous Emission Monitoring Systems*.

The permittee shall prepare a Quality Assurance (QA) Plan outlining the quality assurance procedures used to verify the reliability of the COMS data. Such a document shall specify the frequency at which each quality assurance procedure will be performed.

Recordkeeping – The permittee shall maintain the following records related to the QA Plan and COMS. Such records shall be retained for a period of at least five years and shall be well organized and readily accessible for inspection by Ecology personnel:

1) A copy of the QA Plan.
2) Records of all quality assurance procedures performed for a period of five years.
3) Chart recorder readings or computer file data from the COMS.

Reporting – The QA Plan shall be submitted to Ecology no later than 60 days following issuance of this AOP, and shall be subject to Ecology approval.

[Order No. DE 95AQ-E131 4th Amendment Issued 1/6/17, Approval Conditions 5, 6], [WAC 173-401-630(1), 9/16/02, 2/3/16 (S)], [Order No. PSD-X80-11, Issued 07/28/80, Approval Condition 6b], [40 CFR 60.48b(a), 60.49b(f), 7/1/17]

11M. The following conditions shall apply to the monitoring, recordkeeping, and reporting required for the hog fuel boiler.

1) The following monitoring equipment shall be maintained in good operating condition:
   a) A gage on the multi-clone to measure differential pressure.
   b) Continuous Opacity Monitoring System as otherwise required.
   c) Instrumentation on the Electrostatic Precipitator displaying the secondary voltage for each Transformer – Rectifier set.
2) The following recordkeeping specific to the hog fuel boiler shall be retained for a period of five years and kept in an organized, legible manner readily available for inspection by Ecology personnel.
   a) Hours of facility operation.
   b) Wood waste fuel consumption.

c) Natural gas consumption. By January 31st of each year, the permittee shall calculate the annual capacity factor for natural gas using data from the previous calendar year. The annual capacity factor shall be calculated by dividing the total actual heat input from natural gas combustion by the potential heat input to the unit had it been operated for 8,760 hours during the calendar year at the maximum steady state design heat input capacity.

d) The operating rate of the hog fuel boiler (i.e. electricity production rate).

e) A log shall be maintained to record operating problems and maintenance performed on the control equipment.

f) Regular plant maintenance records.

g) Recordkeeping as required by CAM.

3) Reporting specific to the hog fuel boiler shall be conducted in accordance with the following.

a) Total hours of facility operation, total wood waste fuel consumption (tons), and total natural gas consumption (cubic feet) for each semi-annual reporting period shall be submitted in accordance with Standard Condition 1.19.3 Reporting.

[Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Conditions 5, 6], [Order No. PSD-X80-11, Issued 07/28/80, Approval Condition 6b], [40 CFR 60.49b(d), (o), 7/1/17], [WAC 173-401-630(1), 9/16/02, 2/3/16 (S)]

12M. Emissions that result from failure to follow the requirements of the O&M manual or manufacturers' instructions may be considered proof that the plant was not properly operated, maintained and tested. Any six minute averaged emission in excess of 10 percent opacity shall be reported to Ecology on a monthly basis no later than 30 days after the end of the month during which the deviation is discovered. The report should include the following information for each excess emission:

1) The date, time and duration of the deviation.

2) The magnitude of the deviation.

3) An estimate of the excess emissions.

4) The probable cause of the deviation.

5) Any corrective action taken or planned.

6) If corrective action is taken, the results of such action.

7) Any other agency contacted.

[WAC 173-401-615(1)(b), 9/16/02, 2/3/16 (S)]

13M. The following recordkeeping specific to the hog fuel boiler O&M manual shall be retained in an up-to-date manner, well organized, and easily accessible for inspection by Ecology personnel.

1) Normal operating parameters.

2) A maintenance schedule.

3) Monitoring and recordkeeping requirements.

4) A description of the monitoring procedures.

5) Monitoring, operation, and calibration of the COMS.

[Order No. DE 95AQ-E131 4th Amendment, 1/6/17, Approval Condition 5, 6]

14M. The following shall function as Compliance Assurance Monitoring for the hog fuel boiler.

1) The permittee shall conduct monitoring in accordance with the following.

a) Equipment shall be provided that monitors, and displays (digital), electrostatic precipitator secondary voltage in kilovolts for all transformer/rectifier sets (T/R 1 through T/R 4), as well as stack opacity in percent (digitally).

b) At least once per day, the permittee shall evaluate the data obtained through recordkeeping as described in 2) a) below with respect to the following criteria:

i) The two-day average secondary voltage shall not be less than the following trigger limits for any two consecutive days.

a. For the last T/R set through which the exhaust gas travels the trigger limit is 30 KV.

b. For the second to last T/R set through which the exhaust gas travels the trigger limit is 20 KV.

ii) Opacity shall not exceed seven percent for any six-minute period.

c) Under conditions that meet the criteria outlined in 1) b) above, no corrective action is required under CAM.

d) In the event that either of the criteria outlined in 1) b) above are not met, corrective action consistent with the following shall be taken.

i) As soon as possible, but no later than four hours after discovery of the deviation, the permittee shall initiate corrective actions that are designed to return the equipment to normal operation as soon as possible and to prevent the likely recurrence of the cause of the deviation.

ii) Corrective action taken may include, but will not be limited to, checking rappers and vibrators for proper operation, checking multi-clone for possible problems, checking bottom hoppers for buildup, checking ESP electrical systems, turning on the bottom vibrator, tripping the T/R set for an appropriate amount of time, obtaining manufacturer advice, and ESP shutdown and internal inspection along with appropriate subsequent maintenance and/or repair.

2) The permittee shall conduct recordkeeping in accordance with the following.

a) At least once per day, the permittee shall record the values for secondary voltage and secondary amperage for all four transformer/rectifier sets as displayed on the equipment provided.

b) In the event of a deviation from the criteria outlined in 1) b) above, the permittee shall maintain records documenting any ESP corrective action taken, and the results of such action. The records shall be retained in a well organized manner and easily accessible for inspection by Ecology personnel.

3) The permittee shall conduct reporting in accordance with the following.

a) In the event of a deviation from the criteria outlined in 1) b) above, the permittee shall submit a report as part of, or attached to, the monthly deviation report as described in Standard Condition 1.19.2. The report shall include the appropriate data as recorded documenting the date, time and duration of the deviation, the magnitude of the deviation, an estimate of the excess emissions, a description of the corrective action taken, and the results of the corrective action.

b) Upon discovery that the monitoring as designed is insufficient to provide indications of all deviations, the permittee shall notify Ecology of the monitoring deficiency.

[40 CFR 64.3, 64.4(d), 64.7(d), 64.7(e), 64.8, 7/1/17]

COMBUSTION TURBINE

15M. Periodic performance testing shall be conducted every five years or every 8,760 hours of operation, whichever occurs sooner. The following conditions shall apply to all testing:

1) Performance testing shall be conducted during combined cycle operation.

2) Testing shall be conducted for all pollutants of interest as determined by Ecology. The appropriate EPA reference method shall be used for testing of each pollutant. Pollutant emission rates shall be reported in terms consistent with the applicable requirement.

3) Any turbine operating parameters that are monitored shall be recorded during the entire duration of the testing and submitted as part of the test report.

4) Opacity observations using RM 9 shall be conducted for at least one six-minute period during each run of the source testing. A copy of each RM 9 test shall be submitted as part of the test report.

5) An independent testing firm shall conduct the testing and shall submit a test plan for Ecology approval at least 30 days prior to the source testing.

6) The permittee shall notify Ecology of the date of the source testing at least 30 days prior to the date of testing. The permittee shall notify Ecology as soon as possible if any planned source testing is cancelled or rescheduled.

7) The test report shall be sent to Ecology within 60 days after the testing.

[Order No. 02AQER-3519, Issued 05/23/11, Approval Condition 3], [WAC 173-401-630(1), 9/16/02, 2/3/16 (S)], [40 CFR 60.8(a), (b), (c), (d), (f), 7/1/17]

16M. The following conditions shall apply to the monitoring, recordkeeping, and reporting required for the combustion turbine.

1) The following monitoring equipment shall be maintained in good operating condition:

   a) The sulfur and nitrogen content of the fuel shall be monitored. The frequency of the determination of these parameters shall depend on whether the turbine is supplied its fuel from a bulk storage tank or from some continuous source such as a pipeline.

      If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source. If the turbine is supplied its fuel without intermediate bulk storage, the values shall be determined and recorded daily. The permittee may develop custom schedules for determination of the values based on the design and operation of the facility and the characteristics of the fuel supply. Any custom schedule shall be substantiated with data and must be approved by the EPA Administrator (or designee) before they can be used to comply with this requirement.

      In order to compute the nitrogen oxides emissions, the permittee shall use analytical methods and procedures that are accurate to within five percent and are approved by the Administrator. The methods used shall be in accordance with the guidelines in 40 CFR 60.335(c), (d), (e), and (f).

   b) At least once each day that the turbine operates, the permittee shall perform an evaluation of the visible emissions from the stack. If stack opacity is observed to be zero, no action is required besides documentation as described below. If opacity is observed to be non-zero, the permittee shall initiate corrective action to correct the excess emissions within four hours. If corrective action cannot return the turbine to zero opacity within 24 hours, the permittee shall perform, or have performed RM 9 on the turbine stack.

2) The following recordkeeping specific to the combustion turbine shall be retained for a period of five years and kept in an organized, legible manner readily available for inspection by Ecology personnel.

   a) Daily hours of operation, startups and shutdowns, process emissions indications, and gross power generated.

   b) Daily record of natural gas consumed.

   c) Daily results of the sulfur and nitrogen content analysis of the fuel and the calculated sulfur dioxide exhaust gas concentration.

   d) Documentation of the daily opacity evaluations including the name of the person conducting the evaluation, indication of whether initial opacity observation was zero or non-zero, any corrective action taken and the results of such action, and copies of the test forms for any RM 9 tests performed.

3) Reporting specific to the combustion turbine shall be conducted in accordance with the following.

   a) Total hours of facility operation for each semi-annual reporting period shall be submitted in accordance with Standard Condition 1.19.3.

b) Annual emissions reporting as required under Standard Condition 1.19.5, Emission Inventory.

c) Any period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent shall be reported as required by Standard Condition 1.19.2.

d) An annual summary of emissions and operations shall be prepared and submitted in a format agreed to by Ecology.

e) Ecology may periodically request records to be submitted.

[Order No. 02AQER-3519, Issued 05/23/11, Approval Conditions 3.3, 5.1, 5.2, 5.3, 8, 8.1, 8.2, 8.3, 9], [40 CFR 60.334(b), (c)(2), 60.335, 7/1/17], [WAC 173-401-630(1), 9/16/02, 2/3/16 (S)]

17M. In the event of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, permittee shall provide notice as required. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. Ecology may request additional relevant information subsequent to this notice. These requirements are in addition to any pre-construction review requirements as outlined under Standard Condition 1.27.

[40 CFR 60.7(a)(4), 7/1/17]

18M. The following recordkeeping specific to the combustion turbine O&M manual shall be retained in an up-to-date manner, well organized, and easily accessible for inspection by Ecology personnel. Any emissions that result from failure to follow the operating procedures contained within the O&M manual or manufacturers operating instructions may be considered proof that the equipment was not properly installed, operated and/or maintained.

1) Normal operating parameters and design specifications for the unit.

2) A maintenance schedule and procedures for the unit.

[Order No. 02AQER-3519, Issued 05/23/11, Approval Conditions 6, 6.1, 6.2]

19M. The tune-up of the boiler is due no later than April 24, 2019 and according to the applicable provisions in 63.7(a)(2). Performance tune-ups of the boiler shall be conducted every five years thereafter. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup. Each five-year tune-up must be conducted no more than 61 months after the previous tune-up. The burner inspection and the inspection of the system controlling the air-to-fuel ratio may be delayed until the next scheduled unit shutdown; however, the permittee must conduct these inspections at least once every 72 months. The permittee shall maintain records identifying the boiler, the date of tune-up, the procedure followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

The permittee shall prepare, by March 1st of each five year period, and submit to Ecology or the EPA upon request, a five year compliance certification report for

the previous calendar years containing the information specified in 40 CFR 63.11225(b). The permittee must submit the report by March 15th if any instance was had described by 40 CFR 63.11225(b)(3).

The permittee shall maintain onsite and submit, if requested by Ecology or the EPA, a five-year report containing:

1. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.
2. A description of any corrective actions taken as a part of the tune-up of the boiler.
3. The type and amount of fuel used over the 12 months prior to the five-year tune-up of the boiler.

The permittee shall also maintain:

1. Records of the occurrence and duration of each malfunction of the boiler.
2. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a) including corrective actions to restore the malfunctioning boiler to its normal or usual manner of operation.

[40 CFR 63.11201(b), 63.11205(a), 63.11223(b), 63.11225(b), 63.11225(c), 63.11225(d); 7/1/17]

20M. The permittee shall achieve compliance with the energy assessment requirement no later than June 30, 2019.

The permittee must submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed and is an accurate depiction of your facility.

[40 CFR 63.11196(3), 63.11214; 7/1/17]

21M. Submit all of the notifications in 63.7(b); 63.8(e) and (f); 63.9(b) through (e); and 63.9(g) and (h) that apply to the hog fuel boiler by the dates specified in those sections. As specified in 40 CFR 63.9(b)(2), submit the Initial Notification no later than May 1, 2019.

Submit a Notification of Compliance Status, in accordance with 40 CFR 63.9(h), no later than 120 days after July 19, 2014. The notification shall be signed by a responsible official and shall include the applicable certifications of compliances listed in 40CFR 63.11225(a)(4).

[40 CFR 63.11225, 63.11225(1), 63.11225(a)(4); 7/1/17]

22M. Keep records of engine manufacturer data indicating compliance with the emission standards.

An operating log shall be kept, specifying purpose and duration of all operation.

Demonstration of continuous compliance with the operating requirements and limitations include:

1. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
2. Report each instance in which you did not meet an operating limitation.
3. By operating the engine according to the following conditions:
   a. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in nonemergency situations for 50 hours per year, as permitted in this section, is prohibited.
   b. There is no time limit on the use of emergency stationary RICE in emergency situations.
   c. You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
   d. You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Engine must have a non-resettable hour meter.

Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply.

Change oil and filter every 500 hours of operation or annually, whichever comes first (except that sources can extend the period for changing the oil if the oil is part of an oil analysis program as discussed in §63.6625(i). Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the scheduled required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an

unacceptable risk under Federal, State or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and Federal, State, or local law under which the risk was deemed unacceptable.

40 CFR 63, Subpart ZZZZ, §63.6603(a), §63.6625(i), §63.6640, §63.6655, Table 2d(4), 2017] [WAC 173-401-615(1), 9/16/02, 2/3/16(S)]

23M. Keep records of engine manufacturer data indicating compliance with the emission standards.

An operating log shall be kept, specifying purpose and duration of all operation.

For engines with a maximum engine power greater than or equal to 50 HP, the emission standards shall meet 40 CFR 89.112, Table 1 and 40 CFR 89.113 Smoke Emission Standard. For engines with a rated power (kW) greater than 225 and less than 450, Tier 3, shall have a NMHC emission of less than 4.0 g/kW-hr and a CO emission of less than 3.5 g/kW-hr. Exhaust opacity from compression-ignition non-road engines for which this subpart is applicable must not exceed 20 percent during the acceleration mode; 15 percent during the lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes. Opacity levels are to be measured and calculated as set forth in 40 CFR part 86, subpart I

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4204 and §60.4205 over the entire life of the engine.

Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.

Engine must have a non-resettable hour meter.

Demonstration of continuous compliance with the operating requirements and limitations include:

1. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
2. Report each instance in which you did not meet an operating limitation.
3. By operating the engine according to the following conditions:
    a. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in nonemergency situations for 50 hours per year, as permitted in this section, is prohibited.

b. There is no time limit on the use of emergency stationary RICE in emergency situations.

c. You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

d. You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 CFR 60, Subpart IIII, §60.4200(a), §60.4205(b), §60.4206, §60.4207(b), §60.4209(a), §60.4211, §60.4212, §60.4214(b), 2017] [WAC 173-401-615(1), 9/16/02, 2/3/16(S)]

4. NON-APPLICABLE REQUIREMENTS

Ecology has determined that the entire source, including all emission units, is not subject to the following requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance. Such requirements shall therefore be met on a timely basis by the permittee through submittal of a compliance schedule, per WAC 173-401-510(2)(h)(iii)(B).

Inapplicable Requirement	Requirement Description	Explanation
40 CFR 60, Subpart Da	Standards of Performance for Electric Utility Steam Generating Units	The heat input for the boiler is less than 250 MMBtu/hr, therefore the facility is not defined as an Electric Utility Steam Generator as defined by 60.40Da(1)
40 CFR 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	The facility was constructed prior to June 9, 1989 and is not a Small Industrial Commercial Institutional Steam Generator as defined in 60.40c(a)
40 CFR 60, Subpart CCCC	Standards of Performance for Commercial and Industrial Solid Waste Incineration Units	The facility was constructed prior to May 20, 2011 and is not a Commercial and Industrial Solid Waste Incineration Unit as defined in 60.2265
40 CFR 60, Subpart DDDD	Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units	The facility is not a Commercial and Industrial Solid Waste Incineration Unit as defined in 60.2875
40 CFR 60, Subpart EEEE	Standards for Performance for Other Solid Waste Incineration Units	The facility was constructed prior to December 9, 2004, and is not classified as an Other Solid Waste Incinerator as defined in 60.2977
40 CFR 60, Subpart FFFF	Emissions Guidelines and Compliance Times for Other Solid Waste Incineration Units	The facility is not classified as an Other Solid Waste Incinerator as defined in 60.3078
40 CFR 60, Subpart KKKK	Standards or Performance for Stationary Combustion Turbines	The combustion turbine was constructed prior to February 18, 2005.
40 CFR 61	National Emission Standards for Hazardous Air Pollutants	The facility is not a stationary source for which a standard is prescribed
40 CFR 63, Subpart	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	The facility is not a major source for hazardous air pollutants.
40 CFR 63, Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process heaters.	The permittee does not operate a major source of hazardous air pollutants.
40 CFR 68	Chemical Accident Prevention Provisions	The facility does not have more than the threshold quantity of any regulated substance.

DEPARTMENT OF
ECOLOGY
State of Washington

WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 NORTH MONROE
SPOKANE, WASHINGTON 99205-1295

FINAL STATEMENT OF BASIS
FOR
AIR OPERATING PERMIT NUMBER 18AQ-E017
AVISTA CORPORATION
KETTLE FALLS GENERATING STATION
KETTLE FALLS, WASHINGTON

Table of Contents

LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
BTU	British Thermal Units
°C	Degrees Celsius
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf	Dry Standard Cubic Foot
dscf/m	Dry Standard Cubic Foot per minute
Ecology	Washington State Department of Ecology
E.I.T.	Engineer in Training
EPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit
FCAA	Federal Clean Air Act
ft^3	Cubic foot
gr/dscf	Grains per dry standard cubic foot
hr	Hour
lb	Pound
MMBtu	Million British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
NOC	Notice of Construction
NO_x	Oxides of Nitrogen
NSPS	New Source Performance Standard
O_2	Oxygen
O&M	Operation & Maintenance
P.E.	Professional Engineer
PM	Particulate Matter
PM-10	Particulate Matter with aerodynamic diameter ≤ 10 micrometers
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
scfm	Standard Cubic Feet per Minute
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
T	Temperature
TAP	Toxic Air Pollutant
TPD	Tons Per Day
TPY	Tons Per Year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
w%	Percentage by Weight
yr	Year

RELEVANT CHEMICAL INFORMATION

Chemical Abbreviation	Chemical Name	Comments
NH_3	Ammonia	Colorless gas with a penetrating, pungent suffocating odor detectable at 17 ppm. Can also be a liquid if under pressure, or an aqueous solution.
N_2H_4	Hydrazine	Colorless liquid with a weak ammonia odor detectable at 3 to 4 ppm. Can also be a solid at temperatures less than 36° F.
HCl	Hydrochloric Acid	Colorless gas with an irritating, pungent odor
Hg	Mercury	Silvery, mobile, odorless liquid
HNO_3	Nitric Acid	Colorless, yellow, or red fuming liquid with an acrid, suffocating odor
H_3PO_4	Phosphoric Acid	Viscous, colorless, odorless liquid
H_2SO_4	Sulfuric Acid	Colorless to dark brown, oily, dense liquid with a sharp, acrid odor

SELECTED EMISSION UNITS – Annual Potential To Emit in Tons Per Year (tpy)[1]

Emission Units	PM-10 (tpy)	CO (tpy)	NO_X (tpy)	SO_2 (tpy)	HC (tpy)
Hog Fuel Boiler	(>100)*				
	90	1,626	540	6.5	42
Natural Gas Combustion Turbine	2.8	74.0	39.0	0.2	3.3

* Indicates pre-controlled emissions from sources to which Compliance Assurance Monitoring is applicable as reported in proposed CAM plan submitted to Ecology on August 3, 2001.

1.0 INTRODUCTION

This document sets forth the legal and factual basis for the permit conditions in a **FINAL** AOP No. 18AQ-E017 issued by the State of Washington Department of Ecology for a steam electric generating facility fired on wood waste and natural gas located near Kettle Falls, Washington. This document is called a "statement of basis" and is required by Washington State regulations [chapter 173-401 WAC]. A statement of basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

[1] Potential to emit from Avista's October 2006 renewal application

2.0 FACILITY IDENTIFYING INFORMATION

2.1 Company Name----------Avista Corporation

2.1 Facility Name----------Kettle Falls Generating Station

2.2 Unified Business Identification Number----------328-000-223

2.3 Standard Industrial Classification Code----------4977

2.4 Facility Address----------1151 Highway 395 North, Kettle Falls, Washington 99141

2.5 Responsible Official----------Dennis Vermillion, President, Avista Utilities
Mailing Address----------PO Box 3727, Spokane, Washington 99220-3727

2.6 Facility Contact----------Hank Nelson, Environmental Coordinator

2.7 Facility Contact Phone Number----------509-495-4613

3.0 BASIS for TITLE V APPLICABILITY

Avista Corporation, Kettle Falls Generating Station, is subject to Title V, Air Operating Permit Regulations, due to the potential to emit the following pollutants in excess of 100 tons per year; carbon monoxide (CO), oxides of nitrogen (NO_X), and total hydrocarbons (HC). WAC 173-401-200(17)(b) identifies any source that directly emits or has the potential to emit one hundred tpy or more of any air pollutant as a major source. Major sources are required to obtain Title V permits under 173-401-300(1)(a)(i).

4.0 ATTAINMENT CLASSIFICATION

The facility is located in an area classified as attainment for all criteria pollutants as of August 2007.

5.0 PERMITTING HISTORY

July 28, 1980: PSD permit PSD-X80-11, issued for the construction of the wood waste-fired generating facility proposed by Washington Water Power. Revised by EPA letter dated November 23, 1994. In a June 4, 1996 letter to Ecology, the EPA stated that the NOx emission limits in PSD-X80-01 were superseded by the limits in Order No. DE95AQ-E131.

April 4, 1980: Order No. DE 80-254, issued for the construction of a wood-fired boiler at the generating facility and amended on April 18, 1980 and July 27, 1981. BACT represented by emission limits. Included requirement for Avista to reduce area hydrocarbon emissions by purchasing wood waste from lumber facilities currently disposing of wood waste by open burning or wigwam burners.

June 16, 1995: Order No. DE95AQ-E131 approved modification of induced draft fan. BACT determined to be a 70 percent efficient multiclone followed by a 99 percent efficient ESP. Second amendment on July 5, 2002 determined that changes to the fan increased PTE, making the boiler subject to 40 CFR 60, subpart Dc.

December 8, 2004: Source became subject to Title V program

August 21, 1996: Air Operating Permit No. DE 96AQ-E127 issued.

March 5, 2002: Order No. 02AQER-3519 approved the installation of a Solar Titan Taurus 70-T natural gas-fired combustion turbine with duct burner and Heat Recovery Steam Generator (HRSG).

October 31, 2002: Air Operating Permit No. 02AQER-4970 issued.

6.0 TITLE V TIMELINE

6.1 December 8, 1994----------Source became subject to Title V AOP Program

6.2 August 21, 1996---------Original Title V AOP issued (Order No. DE 96AQ-E127)

6.3 August 20, 2001----------DE96AQ-E127 expires

6.4 June 27, 2003----------AOP Order No. 02AQER-4970 Issued

6.5 November 1, 2007----------Order No. 02AQER-4970 Expiration Date

6.6 October 22, 2007----------Order No. 07AQ-E231 issued

6.7 November 2, 2007----------Order No. 07AQ-E231 effective

6.8 November 1, 2012----------Order No. 07AQ-E231 expires

6.9 December 28, 2018----------Order No. 18AQ-E017 issued

6.10 January 1, 2019----------Order No. 18AQ-E017 effective

6.11 December 31, 2023----------Order No. 18AQ-E017 expires

7.0 FACILITY DESCRIPTION

The Kettle Falls Generating Station (KFGS) is located about three miles northwest of Kettle Falls, Washington, in Stevens County. The station electrical output is rated at 50 megawatts (MW) and can produce up to 53.5 MW gross. Construction of the KFGS began in 1981 and commercial operation began in December 1983. The KFGS uses a wood-waste fired spreader stoker boiler to produce steam to drive a single shaft turbine-generator for the production of electricity. The facility is shut down for scheduled repair and maintenance approximately 10 days each year.

The facility site plan in Appendix A shows the layout of the KFGS. Figures 2 through 7 in Appendix A (Process Flow Diagrams) identify the flow of feed materials and byproducts to and from the KFGS. Major equipment or processes include wood-waste receiving, handling system and storage, boiler and fuel firing system, turbine – generator, particulate matter removal system, ash handling system, water treatment system (purification), cooling towers, and wastewater treatment system.

7.1 *Boiler Water Treatment.* Boiler water for the plant is obtained from the Kettle Falls municipal water system. Because of the hardness of the supplied water, treatment is needed prior to use in the boiler. In the water treatment building, two demineralizer systems employ ion exchange to remove excess hardness. Resins used for ion exchange are regenerated after treating roughly 44,000 gallons of water. The cation exchange resins are regenerated using sulfuric acid, while the anion exchange resins are regenerated using caustic soda. The sulfuric acid and caustic soda are stored in the water treatment building in two 7,500 gallon above-ground tanks. The effluent from regeneration passes to a neutralization sump, and then discharges to the outdoor retention basins.

Other chemicals added to the boiler water include hydrazine for oxygen scavenging, and small amounts of ammonia for pH control. Hydrazine is stored in 55 gallon drums at the KFGS. A hand pump is installed in the drum and piped into the day tank where it is diluted and pumped as needed. Usage is approximately 0.28 gallons per day of operation, or 2.2 pounds per day of operation. A chemical laboratory in the boiler building receives samples from 11 different points in the plant. These samples

are used to detect and control corrosion and check the performance of systems used for feed water treatment.

7.2 *Wastewater* from the facility is processed by the wastewater treatment system. The treatment system processes about 124,000 gallons per day on an average basis. Cooling tower water accounts for over 80 percent of the water treated. Boiler water blowdown, effluent from the demineralizer regeneration process, and water from the oil/water separators are discharged to the wastewater facility. The system includes two settling ponds, a retention basin, and a clarifier. Wastewater from the plant goes to the settling ponds, then on to the retention basin. When the retention basin is full, the wastewater is passed through the clarifier and either recirculated or discharged to the Columbia River. Chemicals are not added to the clarifier, and it is not operated as a clarifier; rather, it acts as a tank through which the wastewater passes.

7.3 *Wood-waste Collection and Transport.* The wood-waste burned in the boiler is purchased from sawmills and other sources of wood-waste located within a 250-mile radius of the station. Wood waste arrives at the station by truck, and is unloaded by two truck dumpers into a receiving hopper. Wood from the receiving hopper is conveyed at up to 300 tons per hour through a metal detector and magnet to remove tramp metal. A disc screen sorts the wood according to size. Wood scraps less than four inches in size are transferred by conveyor to the stackout system. Oversize material is rejected to a hammer mill where it is broken into smaller pieces before transfer to the stackout systems.

The KFGS uses two stackout systems. The first uses a traveling tripper conveyor to distribute wood-waste to the fuel storage pile, where a bulldozer distributes the fuel in the storage area. The second system employs a swinging boom to distribute the fuel onto the live storage pile at the reclaim area.

From the live storage pile, an over-the-pile reclaimer moves the fuel onto a conveyor in the main reclaim area for transport by covered conveyors to the power plant. Fuel can be moved to the auxiliary reclaimer by bulldozer. From the auxiliary reclaim box, fuel is transferred via a box-chain conveyor to belt conveyors that transfer it to the boiler. The outside storage area is uncovered and provides about a 150-day storage capacity.

In the powerhouse, an enclosed drag-chain conveyor carries the wood-waste to six fuel-feeder bins mounted near the plant's boiler. In order to avoid starving the bins, the conveyor is designed to supply 10 percent more fuel than the expected maximum fuel burn rate. Excess fuel is returned to the storage area via conveyor.

7.4 *Hog Fuel Boiler*. The boiler is rated at 415,000 pounds of steam per hour. It produces 1,500 psig steam at a temperature of 950 degrees Fahrenheit. The boiler burns approximately 67 tons of wood per hour. Moisture content of the wood fuel is typically 40-50 percent. The wood-waste fuel firing system consists of six fuel bins feeding six pneumatic distributors. Fuel is distributed evenly across a moving grate, with smaller particles of fuel burned in suspension and larger particles burning on the grate.

The boiler can also be fired with natural gas. Under normal operation, natural gas is used for startup and when wet wood is being burned. The boiler can also be operated on natural gas at low load conditions. The boiler is equipped with four natural gas

burners capable of providing a maximum total heat input of 245 million British Thermal Units per hour (MMBtu/hr).

The original boiler design consisted of eight gas nozzles (spuds) with twelve holes in each, providing a flow rate of 61,220 standard cubic feet per hour per nozzle. Based on design information, provided by the boiler manufacturer, each nozzle hole corresponds to approximately 5,270,000 British Thermal Units per hour (Btu/hr) of heat input. The boiler was modified by removing four of the eight gas nozzles and welding closed one nozzle hole in two of the remaining nozzles. The net effect was a gas firing potential of 242.42 MMBtu/hr, or less than 245 MMBtu/hr.

The boiler is equipped with six retracting soot blowers. The soot blowers are sequentially operated and electrically driven, with 385 psig steam as the blowing medium. Soot blowing occurs on a weekly schedule, usually twice per week for about two hours.

Ash from the air pre-heater hoppers and fly ash from the multiclone is re-injected to the boiler except during low load conditions.

Boiler flue gasses pass through a Zurn Air Systems multiclone to a Flakt, Inc. ESP. The ESP has four fields with a total collection area of 122,723 square feet and a maximum power consumption of 190 kW. The ESP is designed to limit particulate emissions to 0.020 grains/dscf or better. A 700 hp induced draft fan is downstream of the multiclone and upstream of the ESP. Emissions are discharged from a single stack 180 feet tall and 10 feet in diameter. Sampling ports and an opacity meter are located about half way up the stack. Steam from the boiler is supplied to an 18-stage single-flow General Electric (GE) condensing turbine to produce mechanical energy for driving a direct-coupled alternating current (AC) generator. The turbine is a straight condensing, single-flow machine designed for inlet steam conditions of 1,450 psig at 950 °F, with a maximum guaranteed rating of 46,000 kilowatts.

7.5 *The Ash Handling System.* The system consists of screw conveyors that collect ash from the boiler grate, siftings hoppers, air heater, mechanical collector and electrostatic precipitator (ESP). Bottom ash and siftings ash, which consists mostly of sand and rocks originally mixed in with the wood-waste, is transferred to temporary storage by conveyor to a partially enclosed bunker (walls on three sides) just outside the south wall of the boiler building. This ash is periodically loaded into a truck for transport to a solid-waste landfill operated by Avista.

Fly ash from the air heater and mechanical collector(less the amount re-injected into the boiler), and the ESP are collected and conveyed to the fly ash storage area. The fly ash storage area is within a partial enclosure (top and three sides) to minimize the generation of fugitive dust. A screw conveyor transports fly ash to the storage area. Fly ash conveyor to the fly ash storage area is a screw type conveyor. In the final section of the conveyor, water is added and mixed in with the ash to reduce the potential for dust generation when being dropped to the pile. Ash is removed from the ash pile with a front-end loader and loaded into a truck for transport to a solid-waste landfill operated by Avista.

7.6 *Solar Titan Combustion Turbine.* The combustion turbine (CT) system consists of an 86.7 MM Btu/hour natural gas fired turbine/generator, a heat recovery steam generator (HRSG) and a natural gas-fired 8.3 MM Btu/hour duct burner. Power generated by the

turbine is fed into Avistas' electrical grid. Steam produced by the HRSG is routed to hog fuel boiler feed water heater #5. The turbine can operate in combined cycle mode (CT + HRSG ± duct burner) or simple-cycle mode (CT only). The turbine rarely operates in simple-cycle mode, and the duct burner rarely operates during combined-cycle mode.

7.7 *Cooling Tower. The* KFGS has a mechanical draft cooling tower. It is a fiberglass tower, designed for a heat load of 310,000,000 Btu/hr from 30,400 gpm, 95.4°F inlet water. The water is cooled by to about 75°F. Draft is produced by two fans rated at 1,402,000 actual cubic feet per minute (acfm). Chemical treatment of the cooling tower water includes injection of chlorine gas for biological control, addition of sulfuric acid for pH control, and use of a chemical reagent (3D TRASAR©) for scaling and corrosion control. Approximately 4.2 gallons of 3D TRASAR© is used per day. The chlorine gas is stored in a segregated portion of the water treatment building, while the other chemicals are stored in the main part of the water treatment building

7.8 *Fugitive dust* emissions from material handling are controlled through a variety of methods:

Fugitive Dust Emission Source	Method of Fugitive Dust Control
Access roads	Access roads and areas of general vehicle travel are paved
Paved areas	Routinely hosed down after winter (spring washdown) to remove accumulated materials
General housekeeping	Done on an as needed basis
Wood waste system transfer towers	Accumulated material removed on a daily basis
Wood waste system conveyors	Covered
Wood waste reclamation system	Wood-waste normally reclaimed into an underground bunker
Ash collection, conveying, storage, and loadout	Watering and wet suppression
Ash collection and conveying	Enclosed conveyors
Bottom ash storage	Stored in an enclosed bunker
Fly ash storage	Stored in a building (enclosed on 3 sides and top)
Fly Ash Transfer to Storage Pile	Water mixed with ash in screw conveyor prior to dropping to pile
Fly Ash Loadout	Loadout area washed down after each loadout, depending on weather conditions, and on an as needed basis

8.0 FACILITY EMISSION UNITS/PROCESSES

8.1 Facility Wide (Section 2.1 in AOP)

8.2 Wood Waste Collection and Transport System (Section 2.2 in AOP)

8.3 Hog Fuel Boiler (Section 2.3 in AOP)

8.4 Natural Gas Combustion Turbine (Section 2.4 in AOP)

9.0 INSIGNIFICANT EMISSION UNITS AND ACTIVITIES

9.1 CATEGORICALLY INSIGNIFICANT EMISSION UNITS

The permittee proposed numerous insignificant emission units as categorically insignificant based on the requirements outlined in WAC 173-401-532. A list of these units is on file with the Department of Ecology's Eastern Region Office, Air Quality Program in Spokane, Washington.

9.2 INSIGNIFICANT EMISSION UNITS BASED ON SIZE OR PRODUCTION RATE

The following insignificant emission units were proposed by the permittee and have been found by Ecology to meet the requirements outlined in WAC 173-401-533 as insignificant on the basis of size or production rate.

9.2.1 100 gallon capacity hydrazine storage tank and 100 gallon ammonia storage tank – WAC 173-401-533(2)(a), Operation, loading and unloading of storage tanks and storage vessels, with lids or other appropriate closure, two hundred and sixty gallons capacity or less.

9.2.2 One water chlorination system that is not part of the wastewater treatment system with capacity of 30,000 gallons per day – WAC 173-401-533(2)(p), municipal and industrial water chlorination facilities of no greater than twenty million gallons per day capacity. The exemption does not apply to wastewater treatment.

9.2.3 Eight natural gas heaters generating a maximum of 1.39 MMBTU/hr – (WAC 173-401-533(2)(r), space heaters and hot water heaters using natural gas, propane, or kerosene and generating less than five million BTU per hour.

9.2.4 7,500 gallon storage tanks, one containing sodium hydroxide, and one containing sulfuric acid whose concentration is less than 99% – WAC 173-401-533(2)(s), tanks, vessels, and pumping equipment, with lids or other appropriate closure for storage or dispensing of aqueous solution of inorganic salts, bases and acids excluding 99 percent or greater H_2SO_4 or H_3PO_4, 70 percent or greater HNO3, 30 percent or greater HCl, or more than one liquid phase where the top phase is more than one percent VOC's.

9.2.5 The permittee has one fume hood, which is used twice per month, and one vacuum pump, which is used once per month. These units are used only during the water quality analysis that the permittee performs on the process water. Ecology has determined that these two units are insignificant under WAC 173-401-533(3)(c), chemical or physical analytical laboratory operations or equipment including fume hoods and vacuum pumps.

9.2.6 As part of the National Pollutant Discharge Elimination System (NPDES) permitted wastewater treatment system, the permittee operates two settling basins and one retention pond. Ecology has determined that these facilities are insignificant under WAC 173-401-533(3)(d), NPDES permitted ponds

and lagoons utilized solely for the purpose of settling suspended solids and skimming of oil and grease.

9.2.7 The permittee operates a parts washer that contains 10 gallons of Isopar L Fluid. The Material Safety Data Sheet (MSDS) for the substance states that the vapor pressure is one millimeters of mercury (mmHG) at 68°F. Based on information contained in WAC 173-401-533(2)(t), Ecology has determined that the substance does not have a high enough vapor pressure at room temperature to be considered a VOC and is subsequently exempt under WAC 173-401-533(2)(z).

9.3 INSIGNIFICANT EMISSION UNITS BASED ON ACTUAL EMISSIONS

The following insignificant emission units were proposed by the permittee and have been found by Ecology to meet the requirements outlined in WAC 173-401-530(4) as insignificant on the basis of actual emissions.

9.3.1 The permittee has established (via recordkeeping of hours of operation) that the actual emissions from emergency generator and emergency fire pump (both diesel fired) have been below the significance levels in the recent past. However, in order to continue to establish these emission units as insignificant, the permittee must continue to maintain records of hours of operation. This data will be submitted to Ecology as emission inventory data.

9.3.2 The permittee currently has two diesel storage tanks (12,000 and 20,000 gallon capacity) on site. Estimates of the emissions from these tanks (made using EPA TANKS 4.09 modeling software) indicate that the potential to emit is far below significance levels. Emissions from each tank was estimated at less than 50 pounds of diesel fumes per year.

10.0 COMMENTS AND CORRESPONDING

10.1 Comments received during the public comment period and EPA review period are on file at Ecology's Eastern Region Office in Spokane, along with Ecology's response to the comments.

11.0 APPLICABLE AND INAPPLICABLE REQUIREMENTS DETERMINATIONS/ EXPLANATIONS

11.1 INITIAL OR ONE-TIME NOC REQUIREMENTS NOT INCLUDED IN THE AOP AS ONGOING APPLICABLE REQUIREMENTS.

Initial or one-time NOC requirements that have not been included in the AOP as ongoing applicable requirements.

11.1.1 Order No. DE 95AQ-E131 First Amendment, Approval Condition 6.5, If construction of the project is not commenced within 18 months after receipt of the Order approving the Notice of Construction, the approval shall become void.

11.1.1.1 Correspondence from Avista Corporation received June 30, 1995 states that the date the facility will resume full load operation is July 5, 1995. Since the original Order was issued on June 16, 1995, it is clear that construction of the project was commenced within 18 months after receipt of the Order. This correspondence

is located in the facility Permit file at Ecology's Eastern Regional Office in Spokane, Washington.

11.1.2 Order No. DE 95AQ-E131 First Amendment, Approval Condition 4, O&M manuals for all equipment that has the potential to affect emission to the atmosphere shall be developed. Revision of the O&M manual(s) shall be completed within 180 days of issuance of this Order and a copy sent to Ecology for approval.

11.1.2.1 Documentation dated September 01, 1995 indicates that Ecology received the O&M manual from Avista on September 1, 1995, and that the manual was satisfactory. This correspondence is located in the facility Permit file at Ecology's Eastern Regional Office in Spokane, Washington.

11.1.3 Order No. DE 95AQ-E131 First Amendment, Approval Condition 6.4, The modification of the plant to limit natural gas firing capacity to less than 250 million BTU per hour shall require a separate Notice of Construction.

11.1.3.1 The Notice of Construction application materials were received by Ecology on August 3, 1995. Departmental correspondence from Jerry Scheibner dated August 4, 1995 to Avista Corporation determined that an Order was not necessary for this modification due to the fact that the modification did not result in an increase in emissions. This correspondence is located in the facility General file at Ecology's Eastern Regional Office in Spokane, Washington.

11.1.4 Order No. DE 95AQ-E131 First Amendment, Approval Condition 6.4, Within six months of the date of this Order, the permittee shall permanently alter the plant's ability to fire natural gas at any input rate greater than or equal to 250 million BTU per hour.

11.1.4.1 Several articles of correspondence for the facility indicate that the work to limit natural gas firing capacity took place around June 1995. This correspondence is located in the facility General file at Ecology's Eastern Regional Office in Spokane, Washington.

11.1.5 Order No. DE 95AQ-E131 First Amendment, Approval Condition 6.7, The permittee must notify Ecology in writing at least 10 days prior to start up of the modified plant.

11.1.5.1 Notification of start up of the modified plant was received by Ecology on June 30, 1995. This correspondence is located in the facility Permit file at Ecology's Eastern Regional Office in Spokane, Washington.

11.1.6 PSD-X80-11, Issued July 28, 1980, Approval Condition 4, This approval shall become void if on-site construction is not commenced within 18 months after receipt of the approval order, or if on-site construction once initially commenced is discontinued for a period of 18 months.

11.1.6.1 While no correspondence was located which expressly states the date that construction of the facility began, it is clear from correspondence located in the facility general file that construction

took place between 1981 and 1983. Correspondence documenting the initial source test is dated December 27, 1983, indicating that the facility was completely constructed and operating some time prior to that date.

11.1.7 PSD-X80-11, Issued July 28, 1980, Approval Condition 6a, and 40 CFR 60.49b(b), Compliance with emission limits shall be demonstrated by source testing within 60 days after achieving the maximum production rate.

11.1.7.1 Correspondence documenting the initial source test is dated December 27, 1983, and is located in the facility general file. While there is no specific correspondence stating the date that the facility first achieved maximum production rate, it is evident that the initial source testing took place soon after the facility started up.

11.1.8 PSD-X80-11, Issued July 28, 1980, Approval Condition 7, and 40 CFR 60.49b(a), EPA and DOE shall be notified of the commencement of construction date and start-up date within 30 days of the date of their occurrence.

11.1.8.1 While no specific correspondence could be located which indicated that the required notifications took place, the correspondence that exists indicates that there existed significant dialogue between the permittee and EPA/DOE during the initial stages of construction and start-up of the facility.

11.1.9 Order No. 02AQER-3519, Issued March 05, 2002, Approval Condition 2.1, Within 90 days of startup, performance tests for NO_X, CO, and PM-10 shall be performed on the combustion turbine during combined-cycle operation with the duct burner in full operation.

11.1.9.1 This initial performance testing occurred on October 8-10, 2002. An Ecology representative was present during the testing on October 9, 2002.

11.1.10 Order No. 02AQER-3519, Issued March 05, 2002, Approval Condition 1.3, The installation of the combustion turbine shall comply with WAC 197-60, Maximum Environmental Noise levels.

11.1.10.1 As of the date of permit issuance, the installation of the combustion turbine has been completed and no complaints regarding excessive noise levels were received.

11.1.11 Order No. 02AQER-3519, Issued March 05, 2002, Approval Condition 6.1, The permittee shall provide written notification to Ecology of completion of the O&M manual for the turbine project and associated equipment within 60 days of installation of the unit.

11.1.11.1 Specific notification that the O&M manual is complete was received on April 29, 2003.

11.1.12 Order No. 02AQER-3519, Issued March 05, 2002, Approval Condition 6.2 and 40 CFR 60.7(3), The permittee shall provide written notification to

Ecology within 15 days of installation of the turbine and associated equipment.

11.1.12.1 Specific correspondence was received on December 12, 2002 notifying Ecology that the turbine and associated equipment was installed.

11.1.13 40 CFR 60.46b(b), (d), July 01, 2001, Compliance with the particulate matter emission standards and opacity limits shall be determined through performance testing as described.

11.1.13.1 The facility has been tested for particulate matter emissions and opacity using EPA reference methods on multiple occasions. The source test reports are on file with Ecology in the source testing file for the KFGS.

11.2 NOC Requirements Clarifying Miscellaneous Issues to Applicable Emission Unit

The following NOC and/or PSD requirements clarified miscellaneous issues with regard to the applicable emission unit and were not, in actuality, approval conditions. These requirements therefore have not been included in the AOP as ongoing applicable requirements.

11.2.1 Order No. DE 95AQ-E131 Second Amendment, Issued July 11, 2002, Approval Condition 6.1

11.2.1.1 This approval condition states that Order No. DE 95AQ-E131 Second Amendment supercedes the previous Order applying to the hog fuel boiler, Order No. DE80-254.

11.2.2 PSD-X80-11, Issued July 28, 1980, Approval Condition 2

11.2.2.1 This condition clarifies that the emissions increase from the original construction of the Kettle Falls Generating Station will result in emission increases of 250 tpy or more only for particulate matter, oxides of nitrogen, carbon monoxide, and hydrocarbons.

11.2.3 PSD-X80-11, Issued July 28, 1980, Approval Condition 6c

11.2.3.1 This condition states that an annual compliance inspection will be performed on the facility by either the state or EPA. The condition of the PSD permit does not require any action to be taken on the part of the permittee.

11.2.4 PSD-X80-11, Issued July 28, 1980, Approval Condition 8

11.2.4.1 This condition notifies the permittee concerning a recent court decision that EPA anticipated would have significant effect on the PSD permitting program. The condition advises that permittee that due to the effects caused by the court decision, PSD-X80-11 may be subject to reevaluation in the near future. Ecology's records do not contain any indication that such a reevaluation ever took place.

12.0 MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENT (MRRR) SUFFCIENCY EXPLANATIONS

The following section provides brief discussions regarding the reasoning behind the MRRR's included as part of the AOP. The criteria is that each MRRR must be sufficient to assure compliance with the associated condition, emission standard or work practice.

12.1 MRRR **1M** – No specific monitoring can reasonably be required for these requirements. The nature of the requirements makes it necessary to rely on the good faith of the permittee to conscientiously monitor site operations and to promptly report any deviations.

12.2 MRRR **2M** – This monitoring is used for conditions that require the source to maintain a certain status quo (e.g., O&M manual accessible to employees in operation of the equipment; maintaining replacement parts for routine repairs to monitoring equipment). To assure compliance with these provisions, the permittee is simply required to check that there has been no change in the status quo. Since such a change is unlikely, an annual inspection was deemed adequate.

12.3 MRRR **3M** – This MRRR was designed to provide sufficient response to complaints regarding facility emissions affecting the landowners neighboring or in the affected vicinity of the facility. Timeframes were chosen to provide the permittee with adequate time to respond appropriately as well as ensuring that complaints not go unnoticed.

12.4 MRRR **4M** – The monitoring has been designed to require periodic reviews of Operation and Maintenance manuals, the Ash Handling and Disposal Plan, and the original Notice of Construction application materials in order to evaluate whether current operational practices are being conducted in a manner consistent with the information upon which permitting has been based. The recordkeeping and reporting required ensure that practices which are not consistent with the submitted information will be addressed in a timely manner.

12.5 MRRR **5M** – The monitoring has been designed to require periodic walk-around surveys as the most simple and direct method to determine the presence of visible emissions. These surveys, in conjunction with a good faith effort on the part of the permittee to operate in accordance with the conditions of the AOP, are considered sufficient monitoring.

12.6 MRRR **6M** – The monitoring as specified has been designed based on the condition that all associated equipment is maintained in proper working condition. Using emission factors in conjunction with operational parameters is a feasible method of estimating emissions from an emission unit for which performance testing may not be feasible. The monitoring was designed with the goal of providing the permittee with sufficient opportunity to respond to upsets appropriately while at the same time avoiding significant environmental degradation.

12.7 MRRR **7M** – This monitoring has been specified to include the estimation of emissions based on the use of emission factors, as described in 11.6 above. However, this MRRR has been utilized only for emission units for which source testing has been, or will be conducted, and thus the calculations estimating emissions are required to use testing-derived emission factors.

12.8 MRRR **8M** – This monitoring has been specified to rely on periodic source testing in order to gain a reasonable assurance of compliance with the various pollutant limits that apply to the hog fuel boiler. Source testing is the most reliable method for determining emissions, and due to the size of the emission unit, testing is deemed reasonable.

12.9 MRRR **9M** – This monitoring has been specified to apply generally to units subject to Compliance Assurance Monitoring (CAM). The monitoring is included specifically as required by 40 CFR 64.

12.10 MRRR **10M** – A Continuous Opacity Monitor provides real time opacity information. The monitor must be calibrated and maintained in accordance with the quality assurance procedures in order to ensure that the data produced is valid. Because of its nature, this type of monitoring is sufficient.

12.11 MRRR **11M** – This MRRR establishes the minimum monitoring, recordkeeping and reporting information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the boiler.

12.12 MRRR **12M** – The required response time and information required to be submitted as part of the reporting are in accordance with the permit condition and include the necessary information.

12.13 MRRR **13M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the boiler O&M manual.

12.14 MRRR **14M** – The monitoring described is specifically applicable to the hog fuel boiler for the purposes of Compliance Assurance Monitoring (CAM). Compliance Assurance Monitoring must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific emission unit. In order for a pollutant specific emission unit (PSEU) to be subject to CAM, the three conditions described below must be met. The manner in which they are met by the hog fuel boiler is discussed below.

12.14.1 The PSEU must be subject to an emission limit for the applicable pollutant. In the case of the hog fuel boiler, the PSEU is subject to multiple emission limits specific to particulate matter. These applicable requirements are included in Section 2.3 Hog Fuel Boiler of the AOP.

12.14.2 The PSEU must utilize air pollution control equipment to reduce emissions of the applicable pollutant to a level that meets the established emission limit(s). In the case of the hog fuel boiler, the particulate emissions of the PSEU are controlled by a multiple cyclone and a dry electrostatic precipitator (ESP).

12.14.3 The PSEU must have pre-controlled emissions of the specific pollutant that meet or exceed the major source thresholds established in WAC 173-401-200(17). In the case of the hog fuel boiler, the pre-controlled emissions of particulate matter have been calculated to be greater than 100 tons per year (tpy), and thus exceed the major source threshold established in WAC 173-401-200(17).

The proposed CAM monitoring has been designed to rely on electrostatic precipitator (ESP) secondary voltage in conjunction with stack opacity. Through published information and consultation with the ESP manufacturer, secondary voltage was identified as the primary indicator of ESP particulate matter removal efficiency. The particular trigger limits were set based on data obtained during the most recent source test as well as manufacturer advice and engineering judgment.

12.15 MRRR **15M** – This monitoring has been specified to rely on periodic source testing in order to gain a reasonable assurance of compliance with the various pollutant limits that apply to the turbine. Source testing is the most reliable method for determining emissions, and due to the size of the emission unit, testing is deemed reasonable.

12.16 MRRR **16M** – This MRRR establishes the minimum monitoring, recordkeeping and reporting information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the turbine. Much of the information is specifically required by 40 CFR 60, Subpart GG.

12.17 MRRR **17M** – The monitoring is included specifically as required by 40 CFR 60.

12.18 MRRR **18M** – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the turbine O&M manual.

13.0 STREAMLINGIN EXPLANATIONS

13.1 PSD-X80-11, Condition 1 – Emissions of particulate matter from the hog fuel boiler
This condition applies to the hog fuel boiler by limiting emissions of particulate matter to 114 tons per year. This applicable requirement has not been included in the AOP due to the fact that Order No. DE 95AQ-E131, Second Amendment includes a condition (Approval Condition 2.2) that limits particulate matter emissions from the hog fuel boiler to 90 tons per year. Since the condition included in the NOC Order is clearly more stringent and is expressed in the same units as the condition in PSD-X80-11, it is appropriate to apply streamlining to this requirement.

13.2 PSD-X80-11, Condition 1 – Emissions of carbon monoxide from the hog fuel boiler
This condition applies to the hog fuel boiler by limiting emissions of carbon monoxide to 160 pounds per hour and 701 tons per year. The PSD permit was issued on July 28, 1980, and emission limitations were included using the best emission data available at that time. Subsequent data regarding actual emissions of carbon monoxide were identified in correspondence from the Washington Water Power Company (the former name of Avista Corporation) dated October 12, 1994 to USEPA Region X, and in subsequent correspondence from Region X dated October 17, 1994 and November 23, 1994. The new data indicated that the initial estimates of carbon monoxide emissions from the hog fuel boiler underestimated the actual emissions. The November 23, 1994 correspondence from EPA Region X specified that the emission limitations for carbon monoxide imposed by PSD-X80-11 be modified to 1,088 pounds per hour and 4,765 tons per year. Since a subsequent Order issued by the Washington State Department of Ecology includes emission limitations which are equally stringent in terms of pounds per hour (1,088)

and more stringent in terms of tons per year (4,635) than the conditions in PSD-X80-11, it is appropriate to apply streamlining to the PSD requirements.

13.3 PSD-X80-01, Revised November 23, 1994 – limits emissions of nitrogen oxides from the hog fuel boiler to 126 pounds per hour and 540 tons per year. This applicable requirement has not been included in the AOP because PSD permit PSD-X80-01conditions limiting emissions of nitrogen oxides have been superseded by conditions of Order No DE95AQ-E131 (June 4, 1996 correspondence from EPA). Because the limits of 120 pounds per hour and 526 tons per year in Order No. DE95AQ-E131 are more stringent and are expressed in the same units as the conditions in PSD-X80-01, it is appropriate to apply streamlining to this requirement.

13.4 PSD-X80-11, Condition 1 – Emissions of hydrocarbons from the hog fuel boiler – This condition applies to the hog fuel boiler by limiting emissions of hydrocarbons to 160 pounds per hour and 701 tons per year. This applicable requirement has not been included in the AOP due to the fact that Order No. DE 95AQ-E131, First Amendment includes a condition (Approval Condition 2.2) that limits hydrocarbon emissions from the hog fuel boiler to 55 pounds per hour and 210 tons per year. Since the limits imposed by the NOC Order are clearly more stringent and are expressed in the same units as the condition in PSD-X80-11, it is appropriate to apply streamlining to this requirement.

13.5 40 CFR 60.49b(w), July 01, 2001 – Reporting Frequency – This reporting frequency requirement applies to reporting requirements imposed by 40 CFR 60, Subpart Db. The only reporting requirement that applies to the KFGS imposed by Subpart Db is the requirement for deviations reports. This reporting frequency requirement states that the deviation reports must be submitted at least every six months. This requirement has not been included in the AOP as an ongoing requirement because Standard Conditions 1.13.2 of the AOP requires deviations reports to be submitted once per month. The AOP standard condition is clearly more stringent than the frequency required by Subpart Db.

14.0 CLARIFICATIONS AND INTERPRETATIONS

14.1 Section 1 - Standard Conditions – For permit conditions required by Washington State regulations that have been included in the SIP, two dates are given. The first date is the date for the regulation that was adopted into the SIP. The second date is for the most up-to-date version of the regulation. State-only enforceable permit conditions are identified with the symbol (S).

14.2 Recordkeeping retention time – Multiple permits that apply to the permittee (Order No. DE 95AQ-E131 Second Amendment, Order No. PSD-X80-11) include conditions which require applicable recordkeeping/reporting to be maintained for a period of time less than five years. However, Standard Condition 1.27.3 of the AOP requires that the permittee retain all records or information of this type for a period of at least five years. Due to the fact that the five year requirement included in the standard condition is more stringent, this is the requirement that has been included in the appropriate MRRR's. However, the conditions included in the NOC and PSD permits still apply to the permittee and therefore have been included in the AOP under the column labeled Condition, Emission Standard, or Work Practice. The specific conditions that this applies to are listed below.

14.2.1 Order No. DE 95AQ-E131 Second Amendment – Approval Condition(s) 1 and 4

14.2.2 Order No. PSD-X80-11 – Approval Condition(s) 6b

14.3 WAC 173-401-620(1) – Acid Rain Provisions. The permittee is not an affected party as specified in the referenced section of the WAC. Due to this, no permit conditions relating to the acid rain provisions of the FCAA have been included in the AOP. As stated in correspondence dated November 22, 1994 from Ms. Kathy A. Barylski of the USEPA to Mr. W. Lester Bryan of the Washington Water Power Company (now Avista Corporation), the KFGS was determined to be "a solid waste incineration unit under §129(g) of the Clean Air Act and exempt from the Title IV (Acid Rain) requirements…". Additionally, in the Federal Register (Vol. 61 No. 250) dated Friday, December 27, 1996, USEPA states that "Kettle Falls in Washington also should be deleted from Table 2 and excluded from the Acid Rain Program as a solid waste incinerator under § 72.6(b)(7)." This determination was made based on the fact that initially the KFGS was thought to be fired on oil and natural gas. The subsequent determination that the facility is exempt was made based on the fact that the KFGS is fired primarily on hog fuel.

14.4 WAC 173-401-510(2)(h)(i) – Compliance Plan. At the time of permit issuance, no ongoing applicable requirements have been identified with which the permittee is not currently in compliance. However, this does not preclude Ecology from taking future action on past non-compliance.

14.5 Chapter 173-425 WAC, Open Burning – The requirements restricting open burning in the State of Washington apply to the source, and therefore Chapter 173-425 has been included as an applicable requirement under Section 2.1 Facility Wide Requirements. However, Order No. DE 95AQ-E131 includes a permit condition that prohibits open burning on the facility site. The purpose of this statement is to clarify that while Chapter 173-425 WAC does apply to the permittee, the specific condition in the Order cited is more restrictive and thus takes precedence over Chapter 173-425 WAC.

14.6 40 CFR 60.40a, Standards of Performance for Electric Utility Steam Generating Units for which Construction is Commenced After September 18, 1978 – These standards apply to electric steam generating units that have the capability to combust more than 73 megawatts (250 million BTU/hr) heat input of fossil fuel, either alone or in conjunction with any other fuel. Avista KFGS underwent modification (as documented in correspondence located in the facility General file) in 1995 to physically limit the amount of natural gas that could be fired in the boiler. The manner by which the firing capacity of the boiler was reduced involved plugging a certain number of the nozzles available for delivery of natural gas into the combustion chamber. The natural gas firing capacity of the boiler was reduced to approximately 242.5 MBTU/hr heat input. Due to this modification, 40 CFR 60.40a – 60.49a (Subpart Da) does not apply to the unit.

14.7 Applicability of 40 CFR 60, Subpart Db – 40 CFR 60, Subpart Db is applicable to the KFGS due to the fact that the plant has heat input capacity greater than 100 MMBTU/hr (from all fuels) and the plant underwent modification to the induced draft fan in 1995 that increased potential emissions of criteria pollutants, including NO_X. In a recent amendment to Order No. DE95AQ-E131, Avista Corporation

requested to limit natural gas combustion to less than 10 percent of the total heat input to KFGS (annual capacity factor less than 0.10). Due to this natural gas limit, the only requirements from Subpart Db that apply to the facility are those related to particulate matter.

14.8 40 CFR 60.43b(c)(1), Particulate Matter Emissions – Since the KFGS has an annual capacity factor for wood waste combustion greater than 0.30, the applicable particulate matter limit is 0.10 lb/MMBTU heat input. Considering that the estimated peak heat input to the KFGS over a one hour period is 855 MMBTU, the estimated particulate matter limit would be 85.5 lb per hour. (This estimate is based on 95 tons of hog fuel combusted and 4500 BTU/lb (dry) heating value for hog fuel.) Currently, the KFGS is subject to a particulate matter emission limitation of 26 lb/hr by Order No. DE 95AQ-E131, 1st Amendment. Due to the fact that the limit imposed by the Order is significantly more stringent, monitoring, recordkeeping and reporting requirements which are deemed adequate to gain a reasonable assurance of compliance with the 26 lb/hr limit shall be considered adequate with regard to the limit imposed by 40 CFR 60, Subpart Db.

14.9 **5M** Visual Emission Walk-Around Surveys – These surveys are to be performed as the monitoring method by which a reasonable assurance of compliance is obtained. In some cases, as in Condition 2.1.1 of the AOP, the "Testing" column of the AOP includes a reference to either an EPA reference test method, or an Ecology reference test method. The testing column is not intended to imply that personnel must be certified in those test methods in order to be eligible to perform the visual survey described in **5M**. The purpose of the testing column is simply to clarify the reference test method which would be used were certified testing deemed necessary. As a specific example, plant personnel are not required to be RM 9 or RM 9A certified in order to perform the visual survey required by **5M**.

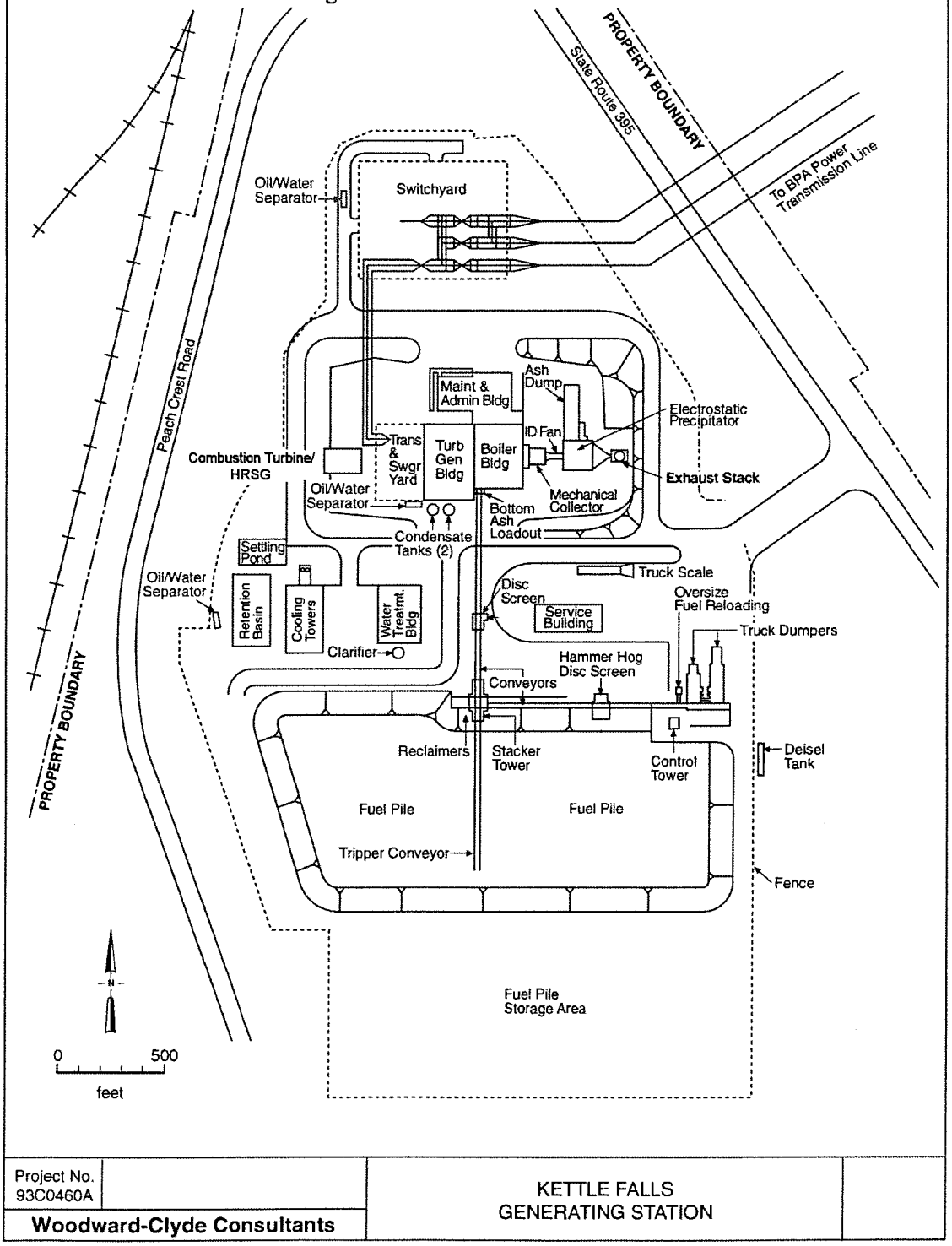
14.10 Benzene and SO_2 Emissions from the Hog Fuel Boiler – During the winter of 2002 and early spring of 2003, the permittee submitted requests for permit amendments to the emission limits for benzene and SO_2 that apply to the main hog fuel fired boiler. Both requests were triggered by the results of source testing conducted in October 2002. The 2002 testing indicated that the benzene emissions were in excess of the limits established by notice of construction Order No. DE 95AQ-E131. This discovery triggered an evaluation of the method used to establish the limit included in the NOC order. Review of the calculations revealed an error in the emission factor used to establish the emission limit. Ecology agreed that the benzene emission limit should be modified in light of this error to be based on the most current testing data. The October 2002 testing also resulted in emissions of SO_2 that exceeded the limit established in the NOC Order. Upon evaluation of the methods used to establish this limit, it was discovered that the emission testing had not been performed in complete accordance with the specifics outlined in 40 CFR 60, Appendix A. However, it was clear that any SO_2 emissions from the boiler would be strictly a function of the sulfur content of the hog fuel and natural gas combusted. Since the sulfur content of hog fuel is very low, and the permittee has no control over it, Ecology agreed with the permittee's assertion that the SO_2 emission limit was unnecessary. Ecology considered that SO_2 emissions are indirectly limited because of the fact that the facility is only allowed to combust hog fuel and natural gas (10 percent).

14.11 Prescribed Testing Methods for Emissions of Formaldehyde, Acetaldehyde, and Benzene from the Hog Fuel Boiler – The AOP has not specified the test methods to be used for future emission testing for these pollutants. The reason for this is that the methods for these pollutants have undergone changes in the past few years, with the most accurate method having changed. Since it is unclear whether the preferred method for measuring emissions of these pollutants will stay constant over the life of the permit, the decision was made to not specify the method, leaving the determination up to agency personnel for approval of future testing protocols.

15.0 APPENDIX A – Site Plan and Process Flow Diagrams

15.1 SITE PLAN

Figure 15.1: Site Plan

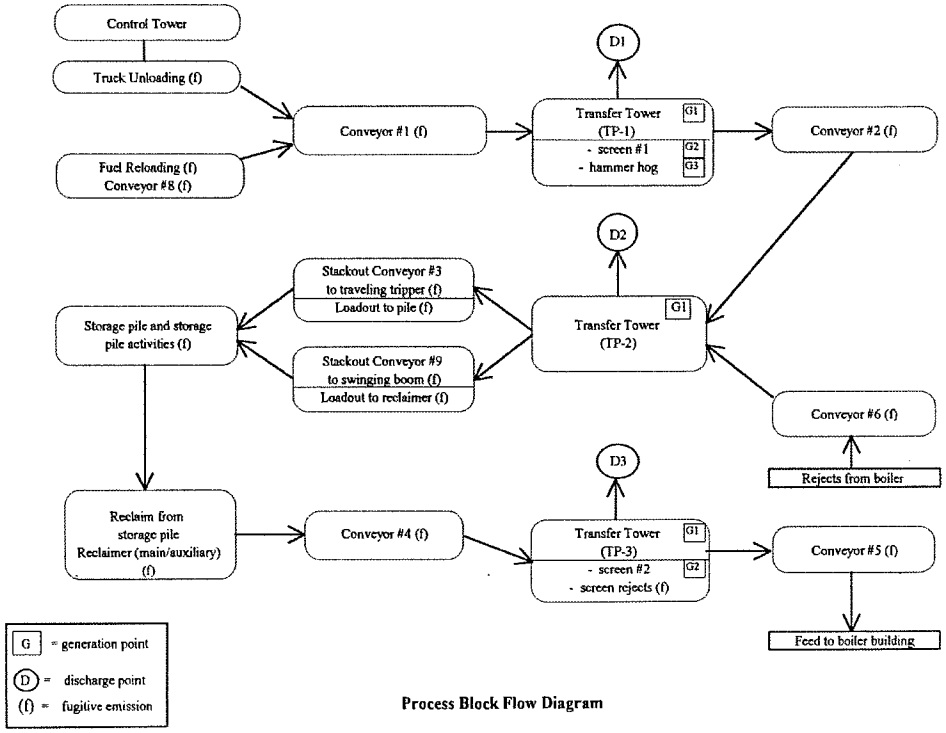


Project No. 93C0460A		KETTLE FALLS GENERATING STATION	
Woodward-Clyde Consultants			

93C0460A-7800/052295/cum

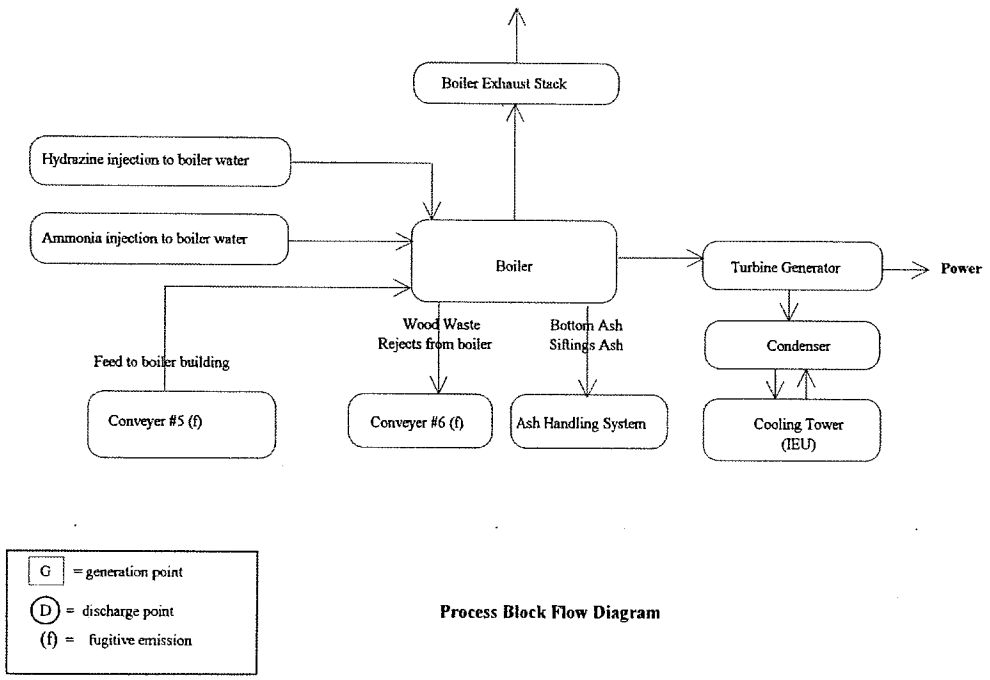
15.2 WOOD WASTE RECEIVING, HANDLING AND STORAGE FLOW DIAGRAM

Figure 15.2
Wood Waste Receiving, Handling and Storage



15.3 ---------- POWER BLOCK (HOG FUEL BOILER) FLOW DIAGRAM

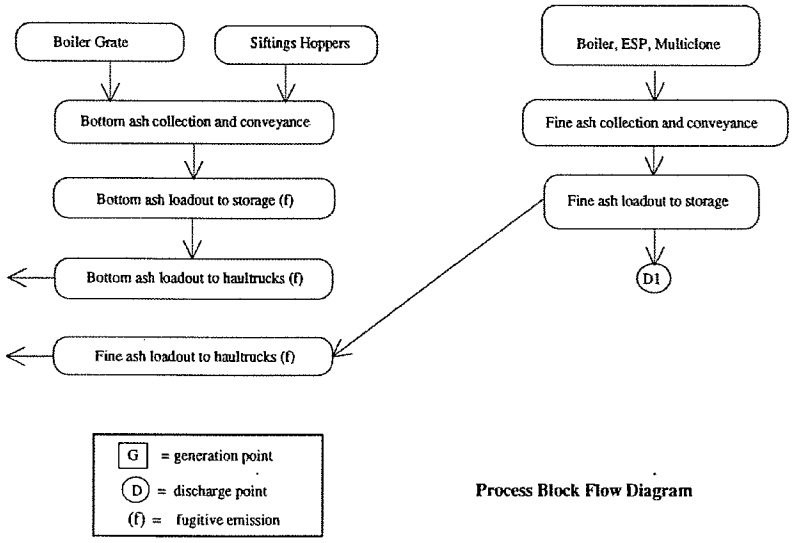
Figure 15.3
Hog Fuel Boiler and Generator



Process Block Flow Diagram

15.4 ASH HANDLING SYSTEM FLOW DIAGRAM

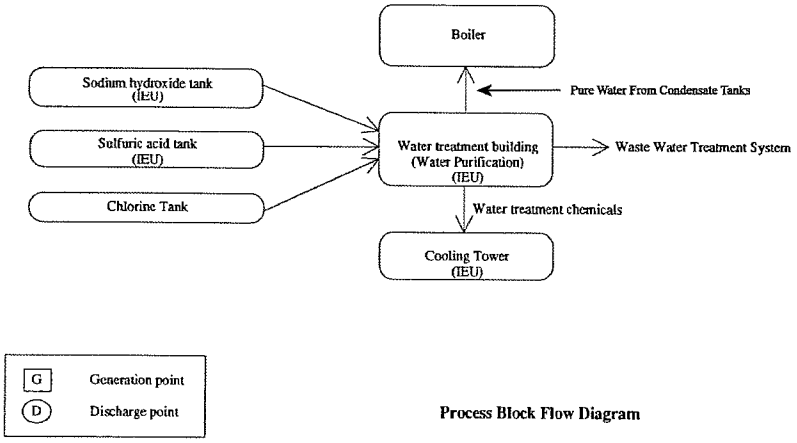
Figure 15.4
Ash Handling System



Process Block Flow Diagram

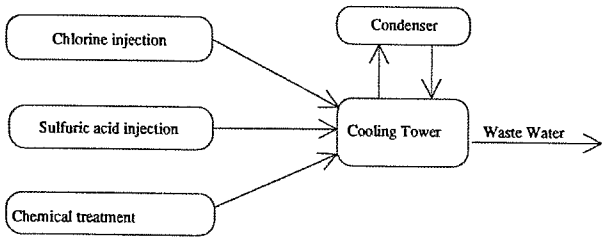
15.5 WATER TREATMENT FLOW DIAGRAM

Figure 15.5
Water Treatment System



15.6 COOLING TOWER FLOW DIAGRAM

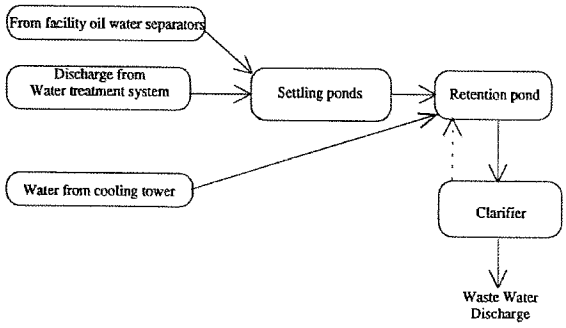
Figure 15.6
Cooling Tower



Process Block Flow Diagram

15.7 WASTEWATER TREATMENT FLOW DIAGRAM

Figure 15.7
Wastewater Treatment



Process Block flow Diagram

United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

EPA

Reply To
Attn Of: AT-082

NOV 23 1994

Hank Nelson
Washington Water Power
P.O. Box 3727
Spokane, Washington 99220

Dear Mr. Nelson:

In an August 31, 1994 letter, you confirmed a discrepancy between historical emission calculations of carbon monoxide (CO) and oxides of nitrogen (NO_x) used to establish 1980 prevention of significant deterioration (PSD) emission limits for the Kettle Falls Generating Station and actual emissions. As a result of the information you provided, the Environmental Protection Agency (EPA) issued a Public Notice indicating its intention to modify the PSD permit for those pollutants. No comments were received during the public comment period to dissuade EPA from granting the revised emission limitations for the Kettle Falls facility.

This letter hereby grants you authorization to change PSD permit No. PSD-X83-01 as follows:

On page 3 of 5, line 9, change 104 to 120, and 456 to 526.

On page 3 of 5, line 10, change 160 to 1088, and 701 to 4765.

Because no comments were received during the public comment period and no substantive changes have been made to our original analysis, the permit modifications are effective immediately.

If you have any questions, please feel free to contact Raymond Nye of my staff at (206) 553-4226.

Sincerely,

actg

Jim McCormick, Director
Air & Toxics Division

cc: Grant Pfeifer, WDOE
Al Newman, WDOE

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 10

1200 SIXTH AVENUE

SEATTLE, WASHINGTON 98101

APPLICATION OF: Washington Water Power P.O. Box 3727 Spokane, Washington 99220	No. PSD-X80-11 APPROVAL OF APPLICATION TO CONSTRUCT

Pursuant to the Agency regulations for the Prevention of Significant Deterioration of Air Quality (PSD) set forth at Title 40, Code of the Federal Regulations, Part 52 and based upon information submitted on July 31, 1979, and supplemented on December 11, 1979 by the Washington Water Power Company, the Regional Administrator now finds as follows:

FINDINGS

1. The Washington Water Power Company (hereafter referred to as Washington Water Power) proposes to construct a 40 megawatt wood waste-fired power plant near Kettle Falls, Washington.

2. An analysis of projected emissions indicates that this project has the potential to emit more than 250 tons per year of nitrogen oxides (NO_x), particulate matter (PM) hydrocarbons (HC) and carbon monoxide (CO), and is therefore subject to PSD review for these pollutants.

3. The proposed modification is located in an area designated as "Class II" under Section 162 (b) of the Clean Air Act.

4. Modeling analyses of CO, NO_x, and PM have been conducted and demonstrate that while emissions of these pollutants will increase, the construction will not cause any violations of the applicable National Ambient Air Quality Standards or PSD increments so long as the plant is operated in accordance with the conditions specified below. With the application of best available control technology, as required by Section 165 (a) (4), operation of the proposed wood waste-fired power plant will meet the applicable PSD requirements.

5. An ambient air quality impact analysis is not required for hydrocarbons because under State requirements, Notice of Construction Docket No. 80-254, Washington Water Power will have firm offset commitments in effect for hydrocarbon emissions (701 tons per year) prior to the start-up of the facility.

6. No "Class I" area or an area with a known PSD increment violation will be impacted.

Accordingly, it is hereby determined that, subject to the conditions set forth below, the Washington Water Power Company will be permitted to construct the power plant at Kettle Falls, Washington described in the information submitted on July 31, 1979 and December 11, 1979.

APPROVAL CONDITIONS

1. Emissions of nitrogen oxide (NO_x), particulate matter (PM), hydrocarbons (HC) and carbon monoxide (CO) shall not exceed the following:

EMISSION LIMITATIONS

Pollutant	lb/hr	tons/yr	Emission Factor
Particulate Matter	26	114	0.02 gr/dscf at 12% CO_2
Opacity			10%
No_x	104	456	
CO	160	701	
Hydrocarbons	160	701	

2. With the exception of particulate matter, oxides of nitrogen, carbon monoxide and hydrocarbons, increases in potential emissions of any pollutant regulated under the Clean Air Act resulting from this construction will be less than 250 tons per year.

3. Washington Water Power shall notify Washington Department of Ecology (DOE) of any occurrence of any emissions in excess of limits specified in Condition Numbers 1 and 2 above; such notification shall be forwarded to DOE in writing in a timely fashion and in each instance no later than ten (10) days from the date of such occurrence. The notification shall include an estimate of the resultant emissions and narrative report of the cause, duration and steps taken to correct the problem and avoid a recurrence. Washington Water Power shall contemporaneously send a copy of all such reports to EPA.

4. This approval shall become void if on-site construction is not commenced within eighteen (18) months after receipt of the approval or if on-site construction once initially commenced is discontinued for a period of eighteen (18) months.

5. As approved and conditioned by this permit any construction, modification or operation of the proposed facility shall be in accordance with the application which resulted in this permit. Nothing in this permit shall be construed to relieve the Washington Water Power Company of its obligations under any state or federal laws including Sections 303 and 114 of the Clean Air Act.

6. Compliance with emission limitations shall be demonstrated by source tests and a program of emission monitoring as described below:

a. Compliance Demonstration:

Compliance testing shall be conducted within sixty (60) days after achieving the maximum production rate at which the power plant will be operated, but not later than 180 days after initial start-up of the project. Emissions from the wood waste-fired boiler will be tested for particulate matter according to EPA methods 1, 2, 3, and 5 (40 CFR, Part 60, Appendix A).

b. Emission Monitoring:

A log shall be maintained to record operating problems and maintenance performed on the control equipment. A continuous opacity monitor must be installed and maintained to moitor the opacity of emissions from the stack. The monitor must meet EPA performance specification in 40 CFR, Part 60, Appendix B. The Company shall maintain

records which identify the operating rate of the wood waste-fired boiler. The information shall be maintained for a period of two years and shall be made available for inspection by EPA or the State upon request.

c. Annual Compliance Inspection

An inspection shall be conducted yearly by the State or EPA to determine whether compliance is being maintained.

7. EPA and DOE shall be notified of the commencement of construction date and the start-up date within thirty (30) days of the date of their occurrence.

8. The United States Court of Appeals for the D.C. Circuit has issued a ruling in the case of Alabama Power Co. v. Douglas M. Costle (78-1006 and consolidated cases) which will have significant impact on the EPA PSD program. The applicant is hereby advised that this permit may be subject to reevaluation as a result of the final court decision and its ultimate effect.

Access to the source by EPA or State regulatory personnel will be permitted upon request for the purpose of compliance assurance inspections. Failure to allow such access is grounds for revocation of this permit.

July 28, 1980
Date

Donald P. Dubois
Regional Administrator

ATTACHMENT B

UIC Permit

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

July 12, 2022

Bryce Robbert
Avista Corporation
1411 East Mission Avenue
Spokane, WA 99220-3727
Bryce.Robbert@avistacorp.com

RE: UIC Site 32566– Well Registration and Authorization with the Underground Injection Control (UIC) Avista Kettle Falls Generation Station (Site), 1151 US Highway 395, Kettle Falls, WA

Bryce Robbert:

We reviewed your UIC registration form for the above-mentioned Site. Based on the information provided in the registration the UIC wells are **Conditionally Rule-Authorized** and a State Waste Discharge Permit is not required to operate the wells, 173-218 WAC. The UIC Site Number is 32566. The Site is also undergoing independent, interim remedial cleanup activities. Ecology has not yet reviewed the cleanup actions to determine if the substantive requirements of the Model Toxics Control Act have been met. To to be delisted as a cleanup site, the Site cleanup activities will need to be evaluated by the Toxic Cleanup Program. The Facility Site Identification Number is 6936654.

The Site cleanup activities involve diesel-contaminated groundwater being captured by an interception trench, treated ex situ through oil-water separation and granular activated carbon, and re-injected up gradient of the plume, with a portion of treated water injected down gradient. Periodically non-toxic, biodegradable, surfactant will be mixed and injected up gradient of the plume. The course of surfactant and mobilized product will be captured within the interception trench. The injection is intended to be completed primarily at the water treatment system infiltration trench where the remaining nitrate will be injected. The residual nitrate mixture will be injected to the adjacent source release area infiltration gallery. Down-

gradient well nitrate concentrations are to be monitored along with all other applicable parameters.

Conditional Rule-Authorization - Conditions of Use

Ecology will continue to Conditionally Rule-Authorized the Site UIC registration for as long as the following conditions of use continue to be met by the owner/operator.

The two UIC Program requirements for Rule Authorization are:

1. Registration of UIC wells (prior to use), and
2. The UIC well must meet the nonendangerment standard (WAC 173-218-080).

In addition, the other Site-specific UIC Program requirements for Conditionally Rule-Authorization include:

- The groundwater analytical results from the monitoring well must meet the applicable MTCA groundwater cleanup levels.
- The injections should not cause a further degradation to groundwater quality criteria at the down-gradient monitoring points per the state or federal applicable criteria. If such groundwater degradation occurs the injection activities shall cease and Ecology shall be notified no later than 24-hours from the degradation discovery.
- Notification to Ecology's UIC Program of any change in UIC well status is a required element to this registration.

The injected compounds are intended to improve groundwater quality. There are inherent environmental risks associated with injecting compounds into groundwater. It is incumbent upon the owner and their representative to carefully characterize, manage, and monitor the site surface and subsurface conditions to minimize risk and prevent unforeseen degradation of groundwater quality and other environmental risks. Mobilized metals or other substances, injected chemicals, or hazardous bi-products, are not allowed to migrate beyond the site property boundary/monitoring wells listed above.

The owner is responsible to retain all plans, modeling, monitoring results, interim, and final reports. Upon Ecology request, the owner shall provide these documents along with this letter to the UIC Program personnel

At any time, Ecology may require you to apply for and obtain a Waste Discharge Permit for the continued use of these compounds. You may obtain a formal approval for this project through the Ecology's State Waste Discharge Permit Program or the Toxics Cleanup Program.

Under the presumptive approach, Ecology presumes the best management practices listed in your registration application and associated documents will be protective of Site ground water

quality. Ecology will presume the non-endangerment requirements of WAC 173-218-080 have been met. If any relevant information provided or represented in this UIC registration is false, misleading, or otherwise misrepresented Ecology shall have cause for modification or termination of this registration.

Under the presumptive approach, Ecology presumes the BMPs listed on your registration application and applied at the Site protect ground water quality, and unless there is site-specific information to indicate otherwise, Ecology will presume the non-endangerment requirements of the UIC program have been met.

Please contact Eugene Radcliff at UICwells@ecy.wa.gov if you have any questions. You can find additional information on the UIC Program can at our website:

> https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Underground-injection-control-program

Sincerely,

Eugene Radcliff, LG, LHG
Statewide UIC Program Coordinator
Water Quality Program

Cc:

Shane Kostka, Landau Associates, SKostka@landauinc.com
Department of Ecology - Internal UIC Database
Department of Ecology - UIC Resource Mailbox

EPA Form 2-C Supplemental Cooling Water Intake Structures

CWA §316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. EPA has promulgated rules for new facilities at 40 CFR 125 Subpart I and for existing facilities at 40 CFR 125 Subpart J. This form requests information from applicants using EPA Form 2-C to determine applicability of CWA 316(b) requirements and inform applicants of additional application requirements that may apply to the facility.

Facility Name: Kettle Falls Generating Station **NPDES Permit Number:** WA004517

SECTION A. APPLICABILITY

☐ **Yes** ☑ **No** Is there a cooling water intake associated with this facility? Cooling water intake means a structure withdrawing cooling water, for contact or noncontact cooling, from a surface water source. Withdrawal from groundwater or a public water system is not applicable. If No, STOP.

1. What is the design intake flow (in gallons per day)? N/A
2. What percentage of the flow is used exclusively for cooling? "
3. What is the maximum intake velocity? "
4. Describe the cooling water system (e.g., once-through, closed-cycle). "
5. Name the surface water body from which cooling water is withdrawn. "
6. Provide latitude/longitude of the cooling water intake(s) (NAD83/WGS84). To ensure accurate locations provide at least 5 significant digits. N/A / N/A
7. Describe the configuration of the intake(s) (e.g., dimensions, screen type). If as-built plans and specifications are available, please provide. "
8. When was the intake(s) installed, including any major modifications? "
9. When was the intake(s) last inspected? If regular inspections are scheduled, provide frequency. "
10. Have there been any studies to determine the impact of the intake(s) on aquatic organisms (e.g., impingement/entrainment studies). ☐ **Yes** ☑ **No** If yes, please provide

SECTION B. APPLICATION REQUIREMENTS

CWA §316(b) requirements apply to all industrial NPDES permitted facilities with cooling water intake structures. EPA has promulgated best technology available (BTA) effluent guidelines for facilities meeting certain thresholds:

- Design intake flow greater than two million gallons per day.
- Greater than 25 percent of the water withdrawn is used for cooling purposes.

Submittal requirements for facilities subject to BTA effluent guidelines:

- New facilities must submit information specified in 40 CFR 122.21(r) and 40 CFR 125.86.
- Existing facilities must submit information specified in 40 CFR 122.21(r) and 40 CFR 125.95.

Facilities subject to BTA guidelines are encouraged to contact Ecology early in the application process. Ecology may consider this application administratively incomplete until the required information is received.

Submittal requirements for existing facilities and new facilities below BTA thresholds:

- Ecology will evaluate the information submitted with this form and may request additional information to assess the need for requirements under 40 CFR 125.90(b) or 40 CRF 125.80(c).

Application Review Checklist for Existing Manufacturing, Commercial, Mining, and Silvicultural Facilities Currently Discharging Process Wastewater Submitting Forms 1 and 2C

Is the facility an existing manufacturing, commercial, mining, or silvicultural facility that is currently discharging process wastewater? If yes, complete Form 1 (General Information) and Form 2C (Existing Manufacturing, Commercial, Mining, and Silvicultural Operations).

This checklist is a tool designed for NPDES permit applicants to aid in the submission of a complete NPDES permit application. The items in the checklist reflect elements that applicants often fail to complete or complete incorrectly. Applicants are encouraged to review the contents of the checklist prior to completing the form(s) and submittal of the application package. Note that "[a]n application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction." (40 CFR 122.21(e))

INSTRUCTIONS

☑ Did you review the Forms 1 and 2C General Instructions?

☑ Did you review the Forms 1 and 2C Line-by-Line Instructions?

☑ Did you review the Form 2C General Instructions for Reporting, Sampling and Analysis?

ATTACHMENTS

☑ Did you attach a topographic map? (Form 1, Item 7.1)
Note: *This is required for all applicants submitting Form 2C. Refer to the line-by-line instructions for Form 1, Item 7.1 for the map requirements.*

Resource: http://nationalmap.gov/

☑ Did you attach a line drawing showing water flow through your facility? (Form 2C, Item 2.1)
Note: *This is required for all applicants submitting Form 2C. Refer to the line-by-line instructions for Form 2C, Item 2.1 for the line drawing requirements.*

☑ Do your additional attachments (if any) provide the required information? Did you provide the information in a format consistent with the form?

EFFLUENT TESTING DATA (FORM 2C, TABLES A THROUGH E)

Form 2C requires applicants to collect and report data for the parameters and pollutants listed in Tables A through E, located at the end of Form 2C. See the line-by-line instructions for Section 7 and the General Instructions for Reporting, Sampling, and Analysis to determine which tables you must complete.

Table	Pollutants/Parameters	Who Completes?
A	Conventional and non-conventional pollutants	All applicants from all outfalls unless a waiver is obtained from the NPDES permitting authority.
B	Toxic metals, cyanide, total phenols, and organic toxic pollutants	Applicants in the primary industry categories listed in Exhibit 2C-3 at the end of these instructions.
C	Certain conventional and non-conventional pollutants	Applicants subject to effluent limitations guidelines (ELGs) that limit pollutants directly or indirectly and applicants who believe pollutants may be present in their facility's discharge.
D	Certain hazardous substances and asbestos	Applicants who believe pollutants may be present in their facility's discharge.
E	2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)	Applicants that use or manufacture the pollutant or believe the pollutant may be present in the facility's discharge.

- ☑ Did you enter the outfall number at the top of the first page of each applicable table?
  Note: *You must complete the applicable tables for each outfall at your facility.*
- ☑ Did you use sufficiently sensitive methods approved under 40 CFR 136 for all quantitative data reported in Form 2C, Tables A through E (as applicable)?
  Note: *The application will not be deemed complete unless all required quantitative data are collected in accordance with sufficiently sensitive, EPA-approved analytical methods. Refer to the General Instructions for Reporting, Sampling, and Analysis for more information.*
  Resource: 40 CFR 136, www.nemi.gov, applicable water quality standards
- ☑ Did you provide the results of at least one analysis for all pollutants for which you marked "Testing Required" or "Believed Present" in Form 2C, Table B and Table C?
- ☑ Did you report effluent testing data in Form 2C, Tables A through E based on at least one analysis taken within 4.5 years prior to the date of the permit application?
  Resource: Your facility's laboratory reports and Discharge Monitoring Reports from the previous 4.5 years
- ☑ Do the values you reported in Form 2C, Tables A through E seem consistent with your facility type and your past performance (i.e., do the values appear to be the correct magnitude)?
- ☑ Did you review your data tables for the following common mistakes?
  - Incorrect long-term average and daily maximum values
  - Quantified values below known detection limits (see definition at 40 CFR 136.2(f))
  - Misplaced decimal points
  - Incorrect or inconsistent concentration units

REVIEWING YOUR RESPONSES

- ☑ Did you account for all outfalls and wastewaters that you are requesting to be permitted as a result of this application?
- ☑ Did you report production rates and flow data in Form 2C, Item 5.4 consistent with the terms and units of the applicable effluent limitations guidelines (ELGs)?
  Resource: www.epa.gov/eg
- ☑ Did you enter the EPA identification number, NPDES permit number, and facility name at the top of the first page of the form and on all attachments?
  Resource: https://www.epa.gov/frs
- ☑ Did you review the form to ensure that you have provided a response to every item (except those for which the form allows you to skip)?
- ☑ Did you complete the application checklists in Form 1, Item 11.1 and Form 2C, Item 12.1 and indicate any attachments you are enclosing?

CERTIFICATION STATEMENT

- ☑ Did the appropriate person, as specified at 40 CFR 122.22(a), sign the certification statements? (Form 1, Item 11.2 and Form 2C, Item 12.2)
  Note: *Refer to the line-by-line instructions for Form 1, Item 11.2 and Form 2C, Item 12.2 for the signatory requirements.*
  Resource: 40 CFR 122.22

United States
Environmental Protection Agency

Office of Water
Washington, D.C.

EPA Form 3510-2C
Revised March 2019

Water Permits Division

Application Form 2C

Existing Manufacturing, Commercial, Mining, and Silvicultural Operations

NPDES Permitting Program

Note: Complete this form ***and*** Form 1 if your facility is an existing manufacturing, commercial, mining, or silvicultural facility that currently discharges process wastewater.

EPA Identification Number	NPDES Permit Number	Facility Name
110008226712	WA0045217	Kettle Falls Generating Station

Form Approved 03/05/19
OMB No. 2040-0004

Form 2C NPDES

EPA

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS

SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below.

Outfall Number	Receiving Water Name	Latitude	Longitude
001	Lake Roosevelt, Columbia River	48° 37′ 13.26″ N	118° 07′ 7.32″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

SECTION 2. LINE DRAWING (40 CFR 122.21(g)(2))

Line Drawing

2.1 Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C–1 at end of instructions for example.)

☑ Yes ☐ No

SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(g)(3))

Average Flows and Treatment

3.1 For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.

Outfall Number 001

Operations Contributing to Flow

Operation	Average Flow
Cooling Tower	0.0478 mgd
Process and Boiler	0.0146 mgd
Reverse Osmosis Reject	0.128 mgd
Total	0.190 mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
474,000 gallon sedimentation basin; Average flow rate of 190,433 GPD; 2.5 day average retention time (not including recirculation through the mixing tank)	1-U	Approved landfill
524 gallon oil/ water separator for process and boiler; Average flow rate of 14,600 GPD; 52 minute average retention time	1-H, 1-U	Approved landfill

EPA Identification Number	NPDES Permit Number	Facility Name
110008226712	WA0045217	Kettle Falls Generating Station

Form Approved 03/05/19
OMB No. 2040-0004

Average Flows and Treatment Continued

3.1 cont.

Outfall Number _____

Operations Contributing to Flow	
Operation	Average Flow
	mgd
	mgd
	mgd
	mgd

Treatment Units		
Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge

Outfall Number _____

Operations Contributing to Flow	
Operation	Average Flow
	mgd
	mgd
	mgd
	mgd

Treatment Units		
Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge

System Users

3.2 Are you applying for an NPDES permit to operate a privately owned treatment works?

☐ Yes ☑ No ➔ SKIP to Section 4.

3.3 Have you attached a list that identifies each user of the treatment works?

☐ Yes ☐ No

EPA Identification Number	NPDES Permit Number	Facility Name
110008226712	WA0045217	Kettle Falls Generating Station

Form Approved 03/05/19
OMB No. 2040-0004

SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(g)(4))

Intermittent Flows

4.1 Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal?

☑ Yes ☐ No ➔ SKIP to Section 5.

4.2 Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.

Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
		Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
001	All operations listed in Section 3.1	4.5 days/week	11.7 months/year	0.190 mgd	0.601 mgd	227 days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days

SECTION 5. PRODUCTION (40 CFR 122.21(g)(5))

Applicable ELGs

5.1 Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility?

☐ Yes ☑ No ➔ SKIP to Section 6.

5.2 Provide the following information on applicable ELGs.

ELG Category	ELG Subcategory	Regulatory Citation

Production-Based Limitations

5.3 Are any of the applicable ELGs expressed in terms of production (or other measure of operation)?

☐ Yes ☐ No ➔ SKIP to Section 6.

5.4 Provide an actual measure of daily production expressed in terms and units of applicable ELGs.

Outfall Number	Operation, Product, or Material	Quantity per Day	Unit of Measure

EPA Identification Number	NPDES Permit Number	Facility Name
110008226712	WA0045217	Kettle Falls Generating Station

Form Approved 03/05/19
OMB No. 2040-0004

SECTION 6. IMPROVEMENTS (40 CFR 122.21(g)(6))

Upgrades and Improvements

6.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No ➔ SKIP to Item 6.3.

6.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

6.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? *(optional item)*

☑ Yes ☐ No ☐ Not applicable

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(g)(7))

Effluent and Intake Characteristics

See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.

Table A. Conventional and Non-Conventional Pollutants

7.1 Are you requesting a waiver from your NPDES permitting authority for one or more of the Table A pollutants for any of your outfalls?

☐ Yes ☑ No ➔ SKIP to Item 7.3.

7.2 If yes, indicate the applicable outfalls below. Attach waiver request and other required information to the application.

Outfall Number _____ Outfall Number _____ Outfall Number _____

7.3 Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?

☑ Yes ☐ No; a waiver has been requested from my NPDES permitting authority for all pollutants at all outfalls.

Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants

7.4 Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)

☑ Yes ☐ No ➔ SKIP to Item 7.8.

7.5 Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?

☑ Yes ☐ No

7.6 List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.

Primary Industry Category	Required GC/MS Fraction(s) (Check applicable boxes.)			
Steam Electric Power Plants	☑ Volatile	☑ Acid	☐ Base/Neutral	☐ Pesticide
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide

Effluent and Intake Characteristics Continued	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☑ Yes ☐ No
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☑ Yes ☐ No
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☑ Yes ☐ No
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes ➔ Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☑ No
	7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☑ Yes ☐ No
	Table C. Certain Conventional and Non-Conventional Pollutants	
	7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed on Table C for all outfalls? ☑ Yes ☐ No
	7.13	Have you completed Table C by providing (1) quantitative data for those pollutants that are limited either directly or indirectly in an ELG and/or (2) quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☑ Yes ☐ No
	Table D. Certain Hazardous Substances and Asbestos	
	7.14	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☑ Yes ☐ No
	7.15	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) by providing quantitative data, if available? ☑ Yes ☐ No
	Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)	
	7.16	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes ➔ Complete Table E. ☑ No ➔ SKIP to Section 8.
	7.17	Have you completed Table E by reporting *qualitative* data for TCDD? ☐ Yes ☐ No

SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(g)(9))

Used or Manufactured Toxics	8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☑ No ➔ SKIP to Section 9.		
	8.2	List the pollutants below.		
		1.	4.	7.
		2.	5.	8.
		3.	6.	9.

EPA Identification Number	NPDES Permit Number	Facility Name
110008226712	WA0045217	Kettle Falls Generating Station

Form Approved 03/05/19
OMB No. 2040-0004

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(g)(11))

Biological Toxicity Tests

9.1 Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) on a receiving water in relation to your discharge?

☐ Yes ☑ No ➔ SKIP to Section 10.

9.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(g)(12))

Contract Analyses

10.1 Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm?

☑ Yes ☐ No ➔ SKIP to Section 11.

10.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	SVL Analytical	Anatek	
Laboratory address	1 Government Gulch Rd, Kellogg, ID 83837	504 E Sprague Ste. D Spokane, WA 99202	
Phone number	(208) 784-1258	(509) 838-3999	
Pollutant(s) analyzed	Refer to analytical attachment	Refer to analytical attachment	

SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(g)(13))

Additional Information

11.1 Has the NPDES permitting authority requested additional information?

☐ Yes ☑ No ➔ SKIP to Section 12.

11.2 List the information requested and attach it to this application.

1.	4.
2.	5.
3.	6.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

12.1 In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.

Column 1	Column 2	
☑ Section 1: Outfall Location	☐ w/ attachments	
☑ Section 2: Line Drawing	☑ w/ line drawing	☐ w/ additional attachments
☑ Section 3: Average Flows and Treatment	☐ w/ attachments	☐ w/ list of each user of privately owned treatment works
☑ Section 4: Intermittent Flows	☐ w/ attachments	
☐ Section 5: Production	☐ w/ attachments	
☑ Section 6: Improvements	☐ w/ attachments	☑ w/ optional additional sheets describing any additional pollution control plans
☑ Section 7: Effluent and Intake Characteristics	☐ w/ request for a waiver and supporting information ☐ w/ small business exemption request ☑ w/ Table A ☑ w/ Table C ☑ w/ Table E	☐ w/ explanation for identical outfalls ☑ w/ other attachments ☑ w/ Table B ☑ w/ Table D ☑ w/ analytical results as an attachment
☐ Section 8: Used or Manufactured Toxics	☐ w/ attachments	
☐ Section 9: Biological Toxicity Tests	☐ w/ attachments	
☑ Section 10: Contract Analyses	☑ w/ attachments	
☐ Section 11: Additional Information	☐ w/ attachments	
☑ Section 12: Checklist and Certification Statement	☐ w/ attachments	

12.2 Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Jason Thackston	SVP, Chief Strategy and Clean Energy C
Signature DocuSigned by: Jason Thackston EC91BFF9033845C...	Date signed Nov-28-2023 | 4:04 PM PST

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii)) [1]

	Pollutant	Waiver Requested (if applicable)	Units (specify)		Effluent: Maximum Daily Discharge (required)	Effluent: Maximum Monthly Discharge (if available)	Effluent: Long-Term Average Daily Discharge (if available)	Effluent: Number of Analyses	Intake (Optional): Long-Term Average Value	Intake (Optional): Number of Analyses
☐	Check here if you have applied to your NPDES permitting authority for a waiver for *all* of the pollutants listed on this table for the noted outfall.									
1.	Biochemical oxygen demand (BOD_5)	☐	Concentration	mg/L	27.5	-	-	1		
			Mass	kg	62.6	872	19.8	1		
2.	Chemical oxygen demand (COD)	☐	Concentration	mg/L	14.2	-	-	2		
			Mass	kg	32.3	450	10.2	2		
3.	Total organic carbon (TOC)	☐	Concentration	mg/L	2.88	-	-	1		
			Mass	kg	6.56	91.3	2.08	1		
4.	Total suspended solids (TSS)	☐	Concentration	mg/L	13.49	-	1.50	187		
			Mass	kg	30.71	427.5	1.08	187		
5.	Ammonia (as N)	☐	Concentration	mg/L	ND			1		
			Mass	-	-					
6.	Flow	☐	Rate	gal/day	601,336	8,372,395	190,433		646,819	
7.	Temperature (winter)	☐	°C	°C	19		14	501		
	Temperature (summer)	☐	°C	°C	28		19	415		
8.	pH (minimum)	☐	Standard units	s.u.	8.9			4025		
	pH (maximum)	☐	Standard units	s.u.	6.6			4025		

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

pH min/max transposed

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.											
Section 1. Toxic Metals, Cyanide, and Total Phenols												
1.1	Antimony, total (7440-36-0)	☑	☑	☐	Concentration	mg/L	0.00189	-	-	1		
					Mass	g	4.30	59.9	1.36	1		
1.2	Arsenic, total (7440-38-2)	☑	☑	☐	Concentration	mg/L	0.00753	-	-	1		
					Mass	g	17.1	239	5.43	1		
1.3	Beryllium, total (7440-41-7)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
1.4	Cadmium, total (7440-43-9)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
1.5	Chromium, total (7440-47-3)	☑	☑	☐	Concentration	mg/L	0.00347	-	-	1		
					Mass	g	7.90	110	2.50	1		
1.6	Copper, total (7440-50-8)	☑	☑	☐	Concentration	mg/L	0.00275	-	-	1		
					Mass	g	6.26	87.2	1.98	1		
1.7	Lead, total (7439-92-1)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
1.8	Mercury, total (7439-97-6)	☑	☐	☑	Concentration	mg/L	0.00000473	-	-	1		
					Mass	g	0.0108	0.150	0.00341	1		
1.9	Nickel, total (7440-02-0)	☑	☑	☐	Concentration	mg/L	0.00095	-	-	1		
					Mass	g	2.2	30	0.68	1		
1.10	Selenium, total (7782-49-2)	☑	☑	☐	Concentration	mg/L	0.00178	-	-	1		
					Mass	g	4.05	56.4	1.28	1		
1.11	Silver, total (7440-22-4)	☑	☐	X	Concentration	mg/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
1.12	Thallium, total (7440-28-0)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
1.13	Zinc, total (7440-66-6)	☑	☑	☐	Concentration	mg/L	0.0056	-	-	1		
					Mass	g	13	180	4.0	1		
1.14	Cyanide, total (57-12-5)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
1.15	Phenols, total	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)												
2.1	Acrolein (107-02-8)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
2.2	Acrylonitrile (107-13-1)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
2.3	Benzene (71-43-2)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
2.4	Bromoform (75-25-2)	☑	☐	☑	Concentration	mg/L	ND			1		
					Mass	-	-					
2.5	Carbon tetrachloride (56-23-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.6	Chlorobenzene (108-90-7)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.7	Chlorodibromomethane (124-48-1)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.8	Chloroethane (75-00-3)	☑	☐	[X]	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
2.9	2-chloroethylvinyl ether (110-75-8)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.10	Chloroform (67-66-3)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.11	Dichlorobromomethane (75-27-4)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.12	1,1-dichloroethane (75-34-3)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.13	1,2-dichloroethane (107-06-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.14	1,1-dichloroethylene (75-35-4)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.15	1,2-dichloropropane (78-87-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.16	1,3-dichloropropylene (542-75-6)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.17	Ethylbenzene (100-41-4)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.18	Methyl bromide (74-83-9)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.19	Methyl chloride (74-87-3)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.20	Methylene chloride (75-09-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.21	1,1,2,2- tetrachloroethane (79-34-5)	☑	☐	|X	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
2.22	Tetrachloroethylene (127-18-4)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.23	Toluene (108-88-3)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.24	1,2-trans-dichloroethylene (156-60-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.25	1,1,1-trichloroethane (71-55-6)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.26	1,1,2-trichloroethane (79-00-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.27	Trichloroethylene (79-01-6)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
2.28	Vinyl chloride (75-01-4)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)												
3.1	2-chlorophenol (95-57-8)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.2	2,4-dichlorophenol (120-83-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.3	2,4-dimethylphenol (105-67-9)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.4	4,6-dinitro-o-cresol (534-52-1)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.5	2,4-dinitrophenol (51-28-5)	☑	☐	☒	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
3.6	2-nitrophenol (88-75-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.7	4-nitrophenol (100-02-7)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.8	p-chloro-m-cresol (59-50-7)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.9	Pentachlorophenol (87-86-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-						
3.10	Phenol (108-95-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
3.11	2,4,6-trichlorophenol (88-05-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)												
4.1	Acenaphthene (83-32-9)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.2	Acenaphthylene (208-96-8)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.3	Anthracene (120-12-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.4	Benzidine (92-87-5)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.5	Benzo (a) anthracene (56-55-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.6	Benzo (a) pyrene (50-32-8)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.7	3,4-benzofluoranthene (205-99-2)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.8	Benzo (ghi) perylene (191-24-2)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.9	Benzo (k) fluoranthene (207-08-9)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.10	Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.11	Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.12	Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.13	Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.14	4-bromophenyl phenyl ether (101-55-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.15	Butyl benzyl phthalate (85-68-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.16	2-chloronaphthalene (91-58-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.17	4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.18	Chrysene (218-01-9)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.19	Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.20	1,2-dichlorobenzene (95-50-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.21	1,3-dichlorobenzene (541-73-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.22	1,4-dichlorobenzene (106-46-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.23	3,3-dichlorobenzidine (91-94-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.24	Diethyl phthalate (84-66-2)	☐	☐	☑	Concentration	ug/L	1.01	-	-	1		
					Mass	g	2.30	32.0	0.728	1		
4.25	Dimethyl phthalate (131-11-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.26	Di-n-butyl phthalate (84-74-2)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.27	2,4-dinitrotoluene (121-14-2)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.28	2,6-dinitrotoluene (606-20-2)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.29	Di-n-octyl phthalate (117-84-0)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.31	Fluoranthene (206-44-0)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.32	Fluorene (86-73-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.33	Hexachlorobenzene (118-74-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.34	Hexachlorobutadiene (87-68-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.35	Hexachlorocyclopentadiene (77-47-4)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.36	Hexachloroethane (67-72-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.37	Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.38	Isophorone (78-59-1)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.39	Naphthalene (91-20-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.40	Nitrobenzene (98-95-3)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.41	N-nitrosodimethylamine (62-75-9)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.42	N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.43	N-nitrosodiphenylamine (86-30-6)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.44	Phenanthrene (85-01-8)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
4.45	Pyrene (129-00-0)	☐	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.46	1,2,4-trichlorobenzene (120-82-1)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)												
5.1	Aldrin (309-00-2)	☐	☐	☑	Concentration							
					Mass							
5.2	α-BHC (319-84-6)	☐	☐	☑	Concentration							
					Mass							
5.3	β-BHC (319-85-7)	☐	☐	☑	Concentration							
					Mass							
5.4	γ-BHC (58-89-9)	☐	☐	☑	Concentration							
					Mass							
5.5	δ-BHC (319-86-8)	☐	☐	☑	Concentration							
					Mass							
5.6	Chlordane (57-74-9)	☐	☐	☑	Concentration							
					Mass							
5.7	4,4'-DDT (50-29-3)	☐	☐	☑	Concentration							
					Mass							
5.8	4,4'-DDE (72-55-9)	☐	☐	☑	Concentration							
					Mass							
5.9	4,4'-DDD (72-54-8)	☐	☐	☑	Concentration							
					Mass							
5.10	Dieldrin (60-57-1)	☐	☐	☑	Concentration							
					Mass							
5.11	α-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
5.12	β-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							
5.13	Endosulfan sulfate (1031-07-8)	☐	☐	☑	Concentration							
					Mass							
5.14	Endrin (72-20-8)	☐	☐	☑	Concentration							
					Mass							
5.15	Endrin aldehyde (7421-93-4)	☐	☐	☑	Concentration							
					Mass							
5.16	Heptachlor (76-44-8)	☐	☐	☑	Concentration							
					Mass							
5.17	Heptachlor epoxide (1024-57-3)	☐	☐	☑	Concentration							
					Mass							
5.18	PCB-1242 (53469-21-9)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
5.19	PCB-1254 (11097-69-1)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
5.20	PCB-1221 (11104-28-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
5.21	PCB-1232 (11141-16-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
5.22	PCB-1248 (12672-29-6)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
5.23	PCB-1260 (11096-82-5)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					
5.24	PCB-1016 (12674-11-2)	☑	☐	☑	Concentration	ug/L	ND			1		
					Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	001

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
5.25	Toxaphene (8001-35-2)	☐	☐	☑	Concentration							
					Mass							

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	1

Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

☑ Check here if you believe all pollutants on Table C to be ***present*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.

☐ Check here if you believe all pollutants on Table C to be ***absent*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
1.	Bromide (24959-67-9)	☑	☐	Concentration	mg/L	0.05	-	-	1		
				Mass	g	0.1	2	0.04	1		
2.	Chlorine, total residual	☑	☐	Concentration	mg/L	0.24	-	0.020	910		
				Mass	kg	0.55	7.6	0.014	910		
3.	Color	☑	☐	Concentration	Color units	5	-	-	1		
				Mass	-	-	-	-	1		
4.	Fecal coliform	☐	☑	Concentration	100/mL	<1.8			1		
				Mass	-	-			1		
5.	Fluoride (16984-48-8)	☑	☐	Concentration	mg/L	1.13	-	-	1		
				Mass	kg	2.57	35.8	0.815	1		
6	Nitrate-nitrite	☑	☐	Concentration	mg/L	3.79	-	-	1		
				Mass	kg	8.63	120	2.73	1		
7.	Nitrogen, total organic (as N)	☑	☐	Concentration	mg/L	0.65	-	-	1		
				Mass	kg	1.5	21	0.47	1		
8.	Oil and grease	☐	☑	Concentration	mg/L	1.53	-	0.94	90		
				Mass	kg	3.48	48.5	0.68	90		
9.	Phosphorus (as P), total (7723-14-0)	☑	☐	Concentration	mg/L	1.45	-	-	1		
				Mass	kg	3.30	46.0	1.05	1		
10.	Sulfate (as SO_4) (14808-79-8)	☑	☐	Concentration	mg/L	714	-	-	1		
				Mass	kg	1,630	22,600	515	1		
11.	Sulfide (as S)	☐	☑	Concentration	mg/L	ND			1		
				Mass	-	-					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	1

Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12.	Sulfite (as SO_3) (14265-45-3)	☐	☑	Concentration	mg/L	ND			1		
				Mass	-	-					
13.	Surfactants	☐	☑	Concentration	mg/L	ND			1		
				Mass	-	-					
14.	Aluminum, total (7429-90-5)	☐	☑	Concentration	mg/L	ND			1		
				Mass	-	-					
15.	Barium, total (7440-39-3)	☑	☐	Concentration	mg/L	305	-	-	1		
				Mass	kg	0.542	7.54	0.172	1		
16.	Boron, total (7440-42-8)	☑	☐	Concentration	ug/L	260	-	-	1		
				Mass	kg	0.592	8.24	0.187	1		
17.	Cobalt, total (7440-48-4)	☑	☐	Concentration	ug/L	0.6	-	-	1		
				Mass	g	1	19	0.4	1		
18.	Iron, total (7439-89-6)	☑	☐	Concentration	mg/L	0.026	-	-	1		
				Mass	g	59	820	19	1		
19.	Magnesium, total (7439-95-4)	☑	☐	Concentration	ug/L	73,700	-	-	1		
				Mass	kg	168	2,340	53.1	1		
20.	Molybdenum, total (7439-98-7)	☑	☐	Concentration	ug/L	20	-	-	1		
				Mass	g	46	630	14	1		
21.	Manganese, total (7439-96-5)	☑	☐	Concentration	mg/L	0.00325	-	-	1		
				Mass	g	7.40	103	2.34	1		
22.	Tin, total (7440-31-5)	☑	☐	Concentration	ug/L	7.1	-	-	1		
				Mass	g	16	230	5.1	1		
23.	Titanium, total (7440-32-6)	☑	☐	Concentration	ug/L	13	-	-	1		
				Mass	g	30	410	9.4	1		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	1

Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24.	Radioactivity										
	Alpha, total	☑	☐	Concentration	pCi/L	14.9			1		
				Mass	-	-					
	Beta, total	☑	☐	Concentration	pCi/L	9.70			1		
				Mass	-	-					
	Radium, total	☑	☐	Concentration	pCi/L	1.74			1		
				Mass	-	-					
	Radium 226, total	☑	☐	Concentration	pCi/L	0.566			1		
				Mass	-	-					

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
1.	Asbestos	☐	☑		
2.	Acetaldehyde	☐	☑		
3.	Allyl alcohol	☐	☑		
4.	Allyl chloride	☐	☑		
5.	Amyl acetate	☐	☑		
6.	Aniline	☐	☑		
7.	Benzonitrile	☐	☑		
8.	Benzyl chloride	☐	☑		
9.	Butyl acetate	☐	☑		
10.	Butylamine	☐	☑		
11.	Captan	☐	☑		
12.	Carbaryl	☐	☑		
13.	Carbofuran	☐	☑		
14.	Carbon disulfide	☐	☑		
15.	Chlorpyrifos	☐	☑		
16.	Coumaphos	☐	☑		
17.	Cresol	☐	☑		
18.	Crotonaldehyde	☐	☑		
19.	Cyclohexane	☐	☑		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
20.	2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☑		
21.	Diazinon	☐	☑		
22.	Dicamba	☐	☑		
23.	Dichlobenil	☐	☑		
24.	Dichlone	☐	☑		
25.	2,2-dichloropropionic acid	☐	☑		
26.	Dichlorvos	☐	☑		
27.	Diethyl amine	☐	☑		
28.	Dimethyl amine	☐	☑		
29.	Dintrobenzene	☐	☑		
30.	Diquat	☐	☑		
31.	Disulfoton	☐	☑		
32.	Diuron	☐	☑		
33.	Epichlorohydrin	☐	☑		
34.	Ethion	☐	☑		
35.	Ethylene diamine	☐	☑		
36.	Ethylene dibromide	☐	☑		
37.	Formaldehyde	☐	☑		
38.	Furfural	☐	☑		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
39.	Guthion	☐	☑		
40.	Isoprene	☐	☑		
41.	Isopropanolamine	☐	☑		
42.	Kelthane	☐	☑		
43.	Kepone	☐	☑		
44.	Malathion	☐	☑		
45.	Mercaptodimethur	☐	☑		
46.	Methoxychlor	☐	☑		
47.	Methyl mercaptan	☐	☑		
48.	Methyl methacrylate	☐	☑		
49.	Methyl parathion	☐	☑		
50.	Mevinphos	☐	☑		
51.	Mexacarbate	☐	☑		
52.	Monoethyl amine	☐	☑		
53.	Monomethyl amine	☐	☑		
54.	Naled	☐	☑		
55.	Naphthenic acid	☐	☑		
56.	Nitrotoluene	☐	☑		
57.	Parathion	☐	☑		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	☐	☑		
59.	Phosgene	☐	☑		
60.	Propargite	☐	☑		
61.	Propylene oxide	☐	☑		
62.	Pyrethrins	☐	☑		
63.	Quinoline	☐	☑		
64.	Resorcinol	☐	☑		
65.	Strontium	☐	☑		
66.	Strychnine	☐	☑		
67.	Styrene	☐	☑		ND (ug/L)
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☑		
69.	TDE (tetrachlorodiphenyl ethane)	☐	☑		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☑		
71.	Trichlorofon	☐	☑		
72.	Triethanolamine	☐	☑		
73.	Triethylamine	☐	☑		
74.	Trimethylamine	☐	☑		
75.	Uranium	☐	☑		
76.	Vanadium	☐	☑		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
77.	Vinyl acetate	☐	☑		ND (ug/L)
78.	Xylene	☐	☑		ND (ug/L)
79.	Xylenol	☐	☑		
80.	Zirconium	☐	☑		

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

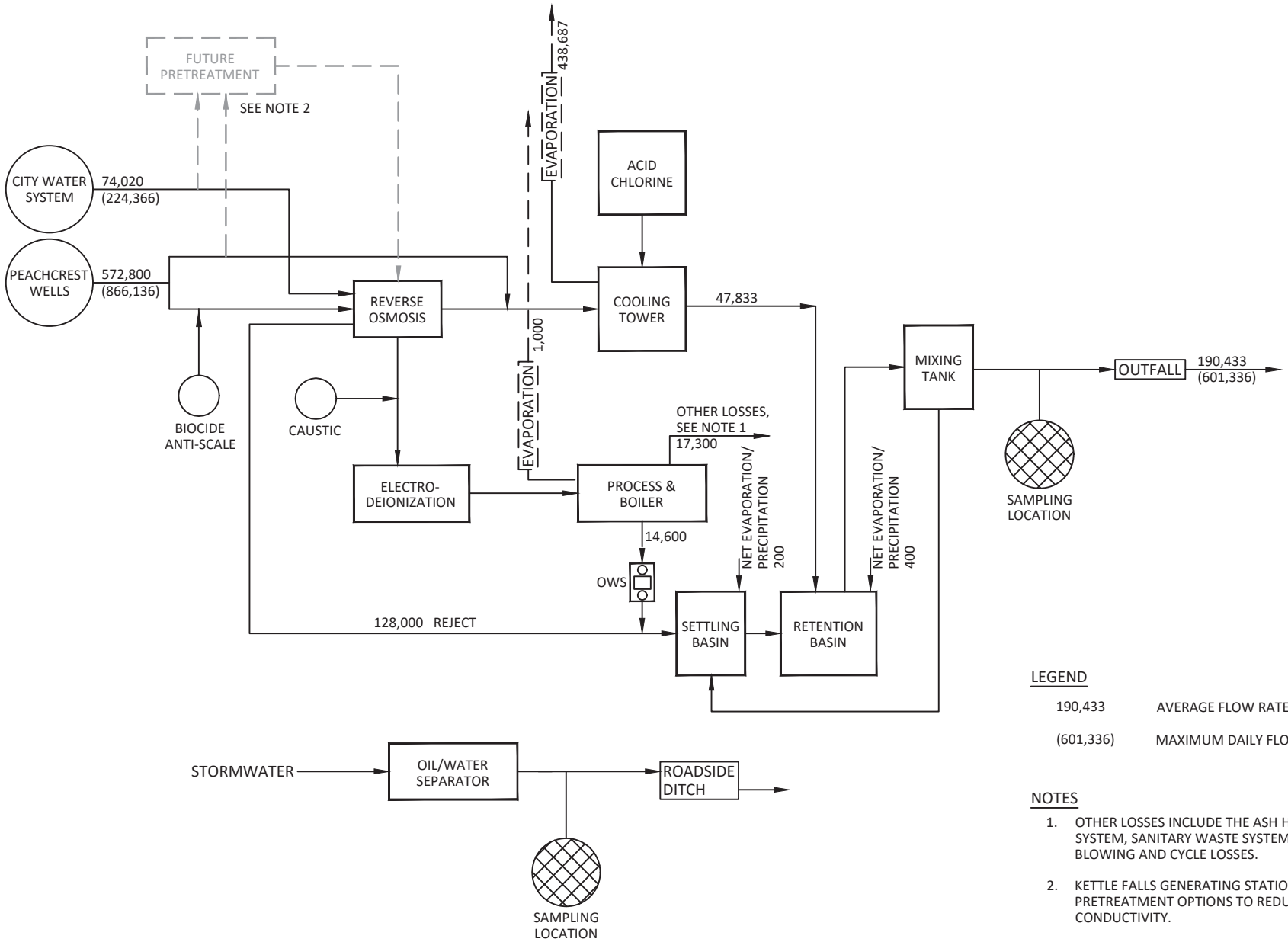
This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	1

TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))

Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☑	

Landau Associates | G:\Projects\236\072\010\011\PFD.dwg | 11/21/2023 8:26 AM | jvalluzzi



LEGEND

190,433	AVERAGE FLOW RATE (GPD)
(601,336)	MAXIMUM DAILY FLOW RATE (GPD)

NOTES

1. OTHER LOSSES INCLUDE THE ASH HANDLING SYSTEM, SANITARY WASTE SYSTEM, AND SOOT BLOWING AND CYCLE LOSSES.
2. KETTLE FALLS GENERATING STATION IS EXPLORING PRETREATMENT OPTIONS TO REDUCE INFLUENT CONDUCTIVITY.

Source: Avista Corp 2018

LANDAU ASSOCIATES

Kettle Falls Generating Station
Avista Corporation
Kettle Falls, Washington

Process Flow Diagram
Current Operations

Figure 2

Table 1
NPDES Permit Outfall 001 Analytical Results
Avista Kettle Falls Generation Station

Analyte	Sample Location, Lab Sample ID, Sample Date		
	24-Hour Composite Sample	Grab Sample	Resampling Event Grab Sample
	Outfall-001 X3H0081-01 7/31/2023	Outfall-001 X3H0081-02 8/1/2023	Outfall-001 X3I0316 9/15/2023
Total Metals (mg/L; EPA 200.8/1631E)			
Aluminum	0.0100 U		
Antimony	**0.00189**	--	--
Arsenic	**0.00753**	--	--
Barium	**0.238**		
Beryllium	0.000160 U	--	--
Cadmium	0.000100 U	--	--
Chromium	**0.00347**	--	--
Cobalt	0.000100 U		
Copper	**0.00275**	--	--
Iron	**0.026**		
Lead	0.00020 U	--	--
Manganese	**0.00325**		
Mercury	--	**0.00000473**	--
Nickel	**0.00095**	--	--
Selenium	**0.00178**		--
Silver	0.00008 U	--	--
Thallium	0.000200 U	--	--
Zinc	**0.0056**	--	--
General Chemistry (mg/L)			
Ammonia as N (EPA 335.4)	--	0.030 U	--
Biological Oxygen Demand (SM 5210B)	--	**27.5**	--
Chemical Oxygen Demand (EPA 410.4)	--	**14.2**	5.0 U
Cyanide, Total	--	0.0050 U	--
Total Organic Carbon	--	**2.88**	--
Total Suspended Solids (SM 2540D)	**11.0**	--	--
Phenolics (EPA 420.1)	--	0.0500 U	--
HEM (EPA 1664B)	--	1.00 U	--
Polychlorinated Biphenyls (µg/L; EPA 608.3)			
Aroclor 1016	0.200 U	--	--
Aroclor 1221	0.200 U	--	--
Aroclor 1232	0.200 U	--	--
Aroclor 1242	0.200 U	--	--
Aroclor 1248	0.200 U	--	--
Aroclor 1254	0.200 U	--	--
Aroclor 1260	0.200 U	--	--

Table 1
NPDES Permit Outfall 001 Analytical Results
Avista Kettle Falls Generation Station

Analyte	Sample Location, Lab Sample ID, Sample Date		
	24-Hour Composite Sample	Grab Sample	Resampling Event Grab Sample
	Outfall-001 X3H0081-01 7/31/2023	Outfall-001 X3H0081-02 8/1/2023	Outfall-001 X3I0316 9/15/2023
Semivolatiles (µg/L; EPA 625.1)			
1,2,4-Trichlorobenzene	0.500 U	--	--
1,2-Dichlorobenzene	0.500 U	--	--
1,2-Dinitrobenzene	0.500 U	--	--
1,2-Diphenylhydrazine	0.500 U	--	--
1,3-Dichlorobenzene	0.500 U	--	--
1,3-Dinitrobenzene	0.500 U	--	--
1,4-Dichlorobenzene	0.500 U	--	--
1,4-Dinitrobenzene	0.500 U	--	--
1-Methylnaphthalene	0.500 U	--	--
2,3,4,6-Tetrachlorophenol	0.500 U	--	--
2,3,5,6-Tetrachlorophenol	0.500 U	--	--
2,4,5-Trichlorophenol	0.500 U	--	--
2,4,6-Trichlorophenol	0.500 U	--	--
2,4-Dichlorophenol	0.500 U	--	--
2,4-Dimethylphenol	0.500 U	--	--
2,4-Dinitrophenol	0.500 U	--	--
2,4-Dinitrotoluene	0.500 U	--	--
2,6-Dinitrotoluene	0.500 U	--	--
2-Chloronaphthalene	0.500 U	--	--
2-Chlorophenol	0.500 U	--	--
2-Methylnaphthalene	0.500 U	--	--
2-Methylphenol	0.500 U	--	--
2-Nitroaniline	0.500 U	--	--
2-Nitrophenol	0.500 U	--	--
3,3'-Dichlorobenzidine	1.00 U	--	--
3+4-Methylphenol	0.500 U	--	--
3-Nitroaniline	0.500 U	--	--
4,6-Dinitro-2-methylphenol	0.500 U	--	--
4-Bromophenylphenylether	0.500 U	--	--
4-Chloro-3-methylphenol	0.500 U	--	--
4-Chloroaniline	0.500 U	--	--
4-Chlorophenyl phenyl ether	0.500 U	--	--
4-Nitroaniline	0.500 U	--	--
4-Nitrophenol	0.500 U	--	--
Acenaphthene	0.500 U	--	--

Table 1
NPDES Permit Outfall 001 Analytical Results
Avista Kettle Falls Generation Station

Analyte	Sample Location, Lab Sample ID, Sample Date		
	24-Hour Composite Sample	Grab Sample	Resampling Event Grab Sample
	Outfall-001 X3H0081-01 7/31/2023	Outfall-001 X3H0081-02 8/1/2023	Outfall-001 X3I0316 9/15/2023
Acenaphthylene	0.500 U	--	--
Aniline	0.500 U	--	--
Anthracene	0.500 U	--	--
Benzidine	1.00 U	--	--
Benzo(a)anthracene	0.500 U	--	--
Benzo(a)pyrene	0.500 U	--	--
Benzo(b)fluoranthene	0.500 U	--	--
Benzo(g,h,i)perylene	0.500 U	--	--
Benzo(k)fluoranthene	0.500 U	--	--
Benzyl Alcohol	0.500 U	--	--
bis(2-Chloro-1-methylethyl)ether	0.500 U	--	--
bis(2-Chloroethoxy)methane	0.500 U	--	--
bis(2-Chloroethyl)ether	0.500 U	--	--
bis(2-Ethylhexyl)phthalate	0.500 U	--	--
Butyl benzyl phthalate	0.500 U	--	--
Carbazole	0.500 U	--	--
Chrysene	0.500 U	--	--
Dibenz(a,h)anthracene	0.500 U	--	--
Dibenzofuran	0.500 U	--	--
Diethyl phthalate	**1.01**	--	--
Dimethyl phthalate	0.500 U	--	--
Di-n-butyl phthalate	0.500 U	--	--
Di-n-octyl phthalate	0.500 U	--	--
Fluoranthene	0.500 U	--	--
Fluorene	0.500 U	--	--
Hexachlorobenzene	0.500 U	--	--
Hexachlorobutadiene	0.500 U	--	--
Hexachlorocyclopentadiene	0.500 U	--	--
Hexachloroethane	0.500 U	--	--
Indeno(1,2,3-cd)pyrene	0.500 U	--	--
Isophorone	0.500 U	--	--
Naphthalene	0.500 U	--	--
Nitrobenzene	0.500 U	--	--
n-Nitrosodimethylamine	0.500 U	--	--
n-Nitroso-di-n-propylamine	0.500 U	--	--
n-Nitrosodiphenylamine	0.500 U	--	--

Table 1
NPDES Permit Outfall 001 Analytical Results
Avista Kettle Falls Generation Station

Analyte	Sample Location, Lab Sample ID, Sample Date		
	24-Hour Composite Sample	Grab Sample	Resampling Event Grab Sample
	Outfall-001 X3H0081-01 7/31/2023	Outfall-001 X3H0081-02 8/1/2023	Outfall-001 X3I0316 9/15/2023
Pentachlorophenol	0.500 U	--	--
Phenanthrene	0.500 U	--	--
Phenol	0.500 U	--	--
Pyrene	0.500 U	--	--
Pyridine	0.500 U	--	--
Volatiles (µg/L; EPA 624.1)			
1,1,1,2-Tetrachloroethane	--	0.500 U	--
1,1,1-Trichloroethane	--	0.500 U	--
1,1,2,2-Tetrachloroethane	--	0.500 U	--
1,1,2-Trichloroethane	--	0.500 U	--
1,1-Dichloroethane	--	0.500 U	--
1,1-Dichloroethene	--	0.500 U	--
1,1-Dichloropropene	--	0.500 U	--
1,2,3-Trichlorobenzene	--	0.500 U	--
1,2,3-Trichloropropane	--	0.500 U	--
1,2,4-Trichlorobenzene	--	0.500 U	--
1,2,4-Trimethylbenzene	--	0.500 U	--
1,2-Dibromo-3-chloropropane	--	0.500 U	--
1,2-Dibromoethane	--	0.500 U	--
1,2-Dichlorobenzene	--	0.500 U	--
1,2-Dichloroethane	--	0.500 U	--
1,2-Dichloropropane	--	0.500 U	--
1,3,5-Trimethylbenzene	--	0.500 U	--
1,3-Dichlorobenzene	--	0.500 U	--
1,3-Dichloropropane	--	0.500 U	--
1,4-Dichlorobenzene	--	0.500 U	--
2,2-Dichloropropane	--	0.500 U	--
2-Chloroethylvinyl ether	--	2.50 U	--
2-Chlorotoluene	--	0.500 U	--
2-Hexanone	--	2.50 U	--
4-Chlorotoluene	--	0.500 U	--
Acetone	--	2.50 U	--
Acrolein	--	2.50 U	--
Acrylonitrile	--	2.50 U	--
Benzene	--	0.500 U	--
Bromobenzene	--	0.500 U	--

Table 1
NPDES Permit Outfall 001 Analytical Results
Avista Kettle Falls Generation Station

Analyte	Sample Location, Lab Sample ID, Sample Date		
	24-Hour Composite Sample	Grab Sample	Resampling Event Grab Sample
	Outfall-001 X3H0081-01 7/31/2023	Outfall-001 X3H0081-02 8/1/2023	Outfall-001 X3I0316 9/15/2023
Bromochloromethane	--	0.500 U	--
Bromodichloromethane	--	0.500 U	--
Bromoform	--	0.500 U	--
Bromomethane	--	0.500 U	--
Carbon Disulfide	--	2.50 U	--
Carbon Tetrachloride	--	0.500 U	--
Chlorobenzene	--	0.500 U	--
Chloroethane	--	0.500 U	--
Chloroform	--	0.500 U	--
Chloromethane	--	0.500 U	--
cis-1,2-Dichloroethene	--	0.500 U	--
cis-1,3-Dichloropropene	--	0.500 U	--
Dibromochloromethane	--	0.500 U	--
Dibromomethane	--	0.500 U	--
Dichlorodifluoromethane	--	0.500 U	--
Ethylbenzene	--	0.500 U	--
Hexachlorobutadiene	--	0.500 U	--
Iodomethane	--	0.500 U	--
Isopropylbenzene	--	0.500 U	--
m,p-Xylene	--	0.500 U	--
Methyl ethyl ketone (MEK)	--	2.50 U	--
Methyl isobutyl ketone (MIBK)	--	2.50 U	--
Methylene Chloride	--	2.50 U	--
Methyl t-butyl ether	--	2.50 U	--
Naphthalene	--	0.500 U	--
n-Butylbenzene	--	0.500 U	--
n-Propylbezene	--	0.500 U	--
o-Xylene	--	0.500 U	--
p-Isopropyltoluene	--	0.500 U	--
sec-Butylbenzene	--	0.500 U	--
Styrene	--	0.500 U	--
tert-Butylbenzene	--	0.500 U	--
Tetrachloroethene	--	0.500 U	--
Toluene	--	0.500 U	--
Total Xylenes	--	0.500 U	--
trans-1,2-Dichloroethene	--	0.500 U	--

Table 1
NPDES Permit Outfall 001 Analytical Results
Avista Kettle Falls Generation Station

Analyte	Sample Location, Lab Sample ID, Sample Date		
	24-Hour Composite Sample	**Grab Sample**	**Resampling Event Grab Sample**
	Outfall-001 X3H0081-01 7/31/2023	Outfall-001 X3H0081-02 8/1/2023	Outfall-001 X3I0316 9/15/2023
trans-1,3-Dichloropropene	--	0.500 U	--
trans-1,4-Dichloro-2-butene	--	2.50 U	--
Trichloroethene	--	0.500 U	--
Trichlorofluoromethane	--	0.500 U	--
Vinyl Acetate	--	2.50 U	--
Vinyl Chloride	--	0.500 U	--

Notes:

Bold text indicates detected analyte**.**

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

EPA = US Environmental Protection Agency
ID = Identification
Lab = laboratory
µg/L = micrograms per liter
mg/L = milligrams per liter
-- = not analyzed
SM = Standard Methods

ATTACHMENT A

Lab Reports

Work Order: **X3H0081**
Landau Associates

LANDAU ASSOCIATES

C
F

31-8660 | [X] **Spokane** (509) 327-9737
193 | [ ] **Portland** (503) 542-1080
178 | [ ]

Date 07/31/2023
Page 1 of 2

Turnaround Time:
Standard
Accelerated

Project Name Avista-KFGS
Project No ~~[illegible]~~ 0556072.010
Project Location/Event NPDES Permit Renewal Sampling
Sampler's Name Weston Boardman
Project Contact Shane Kastka / Carolyn Carlstrom
Send Results To skastka@landauinc.com / ccarlstrom@landauinc.com

Special Handling Requirements:
Shipment Method: FedEx
Stored on ice: (Yes) / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	TSS SM2540-D	PCBs	PP total metals*	PP dissolved metals*	BOD SM5210-B	COD SM5220-D	TOC SM5310-B/C/D	Ammonia (as N) SM4500-NH3-B and C/D/E/G/H	O&G + Grease (HEM)	Habit A or B	Chloride total 325.4
Outfall-001-073123	7/31/23	10:16	water	8	X	X	X	X							
Outfall-001-~~[illegible]~~080123	8/1/23	11:05	1	12					X	X	X	X	X	X	X

Sub Pest/PCB 608 →
Sub SVOC 625 →

Observations/Comments
*only received 7 containers
__ Allow water samples to settle, collect aliquot from clear portion ☐
__ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
__ Dissolved metal samples were field filtered

Other
PP = priority pollutants
*See attached Appendix A for specific analytes and analytical method(s)
see pg 2 for additional analytes

0.2°C

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Weston Boardman	Printed Name Megan Bircher	Printed Name	Printed Name
Company Landau Associates	Company SVL	Company	Company
Date 8/1/23 Time 14:00	Date 8/2/23 Time 1100	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Work Order: **X3H0081**
Landau Associates

LANDAU ASSOCIATES

Chain-of-Custody Record

☒ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐

Date 07/31/2023
Page 2 of 2

Turnaround Time:
Standard X
Accelerated

Project Name Avista-KFGS
Project No. 0236072.010
Project Location/Event see pg 1
Sampler's Name
Project Contact
Send Results To

Special Handling Requirements:
Shipment Method: Fed Ex
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Hg, phenols, EPA 420.1, total ammonia, total chloride	LL Hg	PP VOCs *
outfall-001-080123	8/1/23	11:05	water	12	X	X	X

Sub Phenols 420.1
Sub VOC 624

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion ☐
___ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
___ Dissolved metal samples were field filtered

Other
* See pg 1
PP = see pg 1

0.2°C

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Weston Boardman	Printed Name Megan Bircher	Printed Name	Printed Name
Company Landau Associates	Company SVL	Company	Company
Date 8/1/23 Time 14:00	Date 8/2/23 Time 1100	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Work Order: X3H0081
Landau Associates

Appendix A

List of Pollutants with Analytical Methods, Detection Limits, and Quantitation Levels

The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table for permit and application required monitoring unless:

- Another permit condition specifies other methods, detection levels, or quantitation levels.
- The method used produces measurable results in the sample and EPA has listed it as an EPA-approved method in 40 CFR Part 136.

If the Permittee uses an alternative method, not specified in the permit and as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection limit (MDL) and a quantitation limit (QL) to Ecology with appropriate laboratory documentation.

When the permit requires the Permittee to measure the base neutral compounds in the list of priority pollutants, it must measure all of the base neutral pollutants listed in the table below. The list includes EPA required base neutral priority pollutants and several additional polynuclear aromatic hydrocarbons (PAHs). The Water Quality Program added several PAHs to the list of base neutrals below from Ecology's Persistent Bioaccumulative Toxics (PBT) List. It only added those PBT parameters of interest to Appendix A that did not increase the overall cost of analysis unreasonably.

Ecology added this appendix to the permit in order to reduce the number of analytical "non-detects" in permit-required monitoring and to measure effluent concentrations near or below criteria values where possible at a reasonable cost.

CONVENTIONAL PARAMETERS

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Biochemical Oxygen Demand	SM5210-B		2 mg/L
Soluble Biochemical Oxygen Demand	SM5210-B [3]		2 mg/L
Chemical Oxygen Demand	SM5220-D		10 mg/L
Total Organic Carbon	SM5310-B/C/D		1 mg/L
Total Suspended Solids	SM2540-D		5 mg/L

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Total Ammonia (as N)	SM4500-NH3-B and C/D/E/G/H		20
Flow	Calibrated device		
Dissolved Oxygen	SM4500-OC/OG		0.2 mg/L
Temperature (max. 7-day avg.)	Analog recorder or Use micro-recording devices known as thermistors		0.2º C
pH	SM4500-H^+ B	N/A	N/A

NONCONVENTIONAL PARAMETERS

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Total Alkalinity	SM2320-B		5 mg/L as CaCO3
Chlorine, Total Residual	SM4500 Cl G		50.0
Color	SM2120 B/C/E		10 color units
Fecal Coliform	SM 9221E,9222	N/A	Specified in method - sample aliquot dependent
Fluoride (16984-48-8)	SM4500-F E	25	100
Nitrate + Nitrite Nitrogen (as N)	SM4500-NO3-E/F/H		100
Nitrogen, Total Kjeldahl (as N)	SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H		300
Soluble Reactive Phosphorus (as P)	SM4500- PE/PF	3	10
Phosphorus, Total (as P)	SM 4500 PB followed by SM4500-PE/PF	3	10
Oil and Grease (HEM)	1664 A or B	1,400	5,000
Salinity	SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids	SM2540 -F		100
Sulfate (as mg/L SO_4)	SM4110-B		200
Sulfide (as mg/L S)	SM4500-S^2F/D/E/G		200
Sulfite (as mg/L SO_3)	SM4500-SO3B		2000

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Total Coliform	SM 9221B, 9222B, 9223B	N/A	Specified in method - sample aliquot dependent
Total Dissolved Solids	SM2540 C		20 mg/L
Total Hardness	SM2340B		200 as CaCO3
Aluminum, Total (7429-90-5)	200.8	2.0	10
Barium Total (7440-39-3)	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)	EPA SW 846 8021/8260	1	2
Boron Total (7440-42-8)	200.8	2.0	10.0
Cobalt, Total (7440-48-4)	200.8	0.05	0.25
Iron, Total (7439-89-6)	200.7	12.5	50
Magnesium, Total (7439-95-4)	200.7	10	50
Molybdenum, Total (7439-98-7)	200.8	0.1	0.5
Manganese, Total (7439-96-5)	200.8	0.1	0.5
NWTPH Dx [4]	Ecology NWTPH Dx	250	250
NWTPH Gx [5]	Ecology NWTPH Gx	250	250
Tin, Total (7440-31-5)	200.8	0.3	1.5
Titanium, Total (7440-32-6)	200.8	0.5	2.5

PRIORITY POLLUTANTS

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
METALS, CYANIDE & TOTAL PHENOLS			
Antimony, Total (7440-36-0)	200.8	0.3	1.0
Arsenic, Total (7440-38-2)	200.8	0.1	0.5
Beryllium, Total (7440-41-7)	200.8	0.1	0.5
Cadmium, Total (7440-43-9)	200.8	0.05	0.25
Chromium (hex) dissolved (18540-29-9)	SM3500-Cr EC	0.3	1.2

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Chromium, Total (7440-47-3)	200.8	0.2	1.0
Copper, Total (7440-50-8)	200.8	0.4	2.0
Lead, Total (7439-92-1)	200.8	0.1	0.5
Mercury, Total (7439-97-6)	1631E	0.0002	0.0005
Nickel, Total (7440-02-0)	200.8	0.1	0.5
Selenium, Total (7782-49-2)	200.8	1.0	1.0
Silver, Total (7440-22-4)	200.8	0.04	0.2
Thallium, Total (7440-28-0)	200.8	0.09	0.36
Zinc, Total (7440-66-6)	200.8	0.5	2.5
Cyanide, Total (57-12-5)	335.4	5	10
Cyanide, Weak Acid Dissociable	SM4500-CN I	5	10
Cyanide, Free Amenable to Chlorination (Available Cyanide)	SM4500-CN G	5	10
Phenols, Total	EPA 420.1		50

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
ACID COMPOUNDS			
2-Chlorophenol (95-57-8)	625	1.0	2.0
2,4-Dichlorophenol (120-83-2)	625	0.5	1.0
2,4-Dimethylphenol (105-67-9)	625	0.5	1.0
4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol)	625/1625B	1.0	2.0
2,4 dinitrophenol (51-28-5)	625	1.0	2.0
2-Nitrophenol (88-75-5)	625	0.5	1.0
4-nitrophenol (100-02-7)	625	0.5	1.0
Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol)	625	1.0	2.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
Pentachlorophenol (87-86-5)	625	0.5	1.0
Phenol (108-95-2)	625	2.0	4.0
2,4,6-Trichlorophenol (88-06-2)	625	2.0	4.0

PRIORITY POLLUTANTS (continued)

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
VOLATILE COMPOUNDS			
Acrolein (107-02-8)	624	5	10
Acrylonitrile (107-13-1)	624	1.0	2.0
Benzene (71-43-2)	624	1.0	2.0
Bromoform (75-25-2)	624	1.0	2.0
Carbon tetrachloride (56-23-5)	624/601 or SM6230B	1.0	2.0
Chlorobenzene (108-90-7)	624	1.0	2.0
Chloroethane (75-00-3)	624/601	1.0	2.0
2-Chloroethylvinyl Ether (110-75-8)	624	1.0	2.0
Chloroform (67-66-3)	624 or SM6210B	1.0	2.0
Dibromochloromethane (124-48-1)	624	1.0	2.0
1,2-Dichlorobenzene (95-50-1)	624	1.9	7.6
1,3-Dichlorobenzene (541-73-1)	624	1.9	7.6
1,4-Dichlorobenzene (106-46-7)	624	4.4	17.6
Dichlorobromomethane (75-27-4)	624	1.0	2.0
1,1-Dichloroethane (75-34-3)	624	1.0	2.0
1,2-Dichloroethane (107-06-2)	624	1.0	2.0
1,1-Dichloroethylene (75-35-4)	624	1.0	2.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
VOLATILE COMPOUNDS			
1,2-Dichloropropane (78-87-5)	624	1.0	2.0
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene) (542-75-6) [6]	624	1.0	2.0
Ethylbenzene (100-41-4)	624	1.0	2.0
Methyl bromide (74-83-9) (Bromomethane)	624/601	5.0	10.0
Methyl chloride (74-87-3) (Chloromethane)	624	1.0	2.0
Methylene chloride (75-09-2)	624	5.0	10.0
1,1,2,2-Tetrachloroethane (79-34-5)	624	1.9	2.0
Tetrachloroethylene (127-18-4)	624	1.0	2.0
Toluene (108-88-3)	624	1.0	2.0
1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride)	624	1.0	2.0
1,1,1-Trichloroethane (71-55-6)	624	1.0	2.0
1,1,2-Trichloroethane (79-00-5)	624	1.0	2.0
Trichloroethylene (79-01-6)	624	1.0	2.0
Vinyl chloride (75-01-4)	624/SM6200B	1.0	2.0

PRIORITY POLLUTANTS (continued)

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Acenaphthene (83-32-9)	625	0.2	0.4
Acenaphthylene (208-96-8)	625	0.3	0.6
Anthracene (120-12-7)	625	0.3	0.6

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Benzidine (92-87-5)	625	12	24
Benzyl butyl phthalate (85-68-7)	625	0.3	0.6
Benzo(*a*)anthracene (56-55-3)	625	0.3	0.6
Benzo(b)fluoranthene (3,4-benzofluoranthene) (205-99-2) [7]	610/625	0.8	1.6
Benzo(j)fluoranthene (205-82-3) [7]	625	0.5	1.0
Benzo(k)fluoranthene (11,12-benzofluoranthene) (207-08-9) [7]	610/625	0.8	1.6
Benzo(r,s,t)pentaphene (189-55-9)	625	0.5	1.0
Benzo(*a*)pyrene (50-32-8)	610/625	0.5	1.0
Benzo(*ghi*)Perylene (191-24-2)	610/625	0.5	1.0
Bis(*2-chloroethoxy)*methane (111-91-1)	625	5.3	21.2
Bis(*2-chloroethyl*)ether (111-44-4)	611/625	0.3	1.0
Bis(*2-chloroisopropyl*)ether (39638-32-9)	625	0.3	0.6
Bis(*2-ethylhexyl*)phthalate (117-81-7)	625	0.1	0.5
4-Bromophenyl phenyl ether (101-55-3)	625	0.2	0.4
2-Chloronaphthalene (91-58-7)	625	0.3	0.6
4-Chlorophenyl phenyl ether (7005-72-3)	625	0.3	0.5
Chrysene (218-01-9)	610/625	0.3	0.6
Dibenzo (a,h)acridine (226-36-8)	610M/625M	2.5	10.0
Dibenzo (a,j)acridine (224-42-0)	610M/625M	2.5	10.0
Dibenzo(a-*h*)anthracene	625	0.8	1.6

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
(53-70-3)(1,2,5,6-dibenzanthracene)			
Dibenzo(a,e)pyrene (192-65-4)	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene (189-64-0)	625M	2.5	10.0
3,3-Dichlorobenzidine (91-94-1)	605/625	0.5	1.0
Diethyl phthalate (84-66-2)	625	1.9	7.6
Dimethyl phthalate (131-11-3)	625	1.6	6.4
Di-n-butyl phthalate (84-74-2)	625	0.5	1.0
2,4-dinitrotoluene (121-14-2)	609/625	0.2	0.4
2,6-dinitrotoluene (606-20-2)	609/625	0.2	0.4

PRIORITY POLLUTANTS (continued)

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Di-n-octyl phthalate (117-84-0)	625	0.3	0.6
1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	1625B	5.0	20
Fluoranthene (206-44-0)	625	0.3	0.6
Fluorene (86-73-7)	625	0.3	0.6
Hexachlorobenzene (118-74-1)	612/625	0.3	0.6
Hexachlorobutadiene (87-68-3)	625	0.5	1.0
Hexachlorocyclopentadiene (77-47-4)	1625B/625	0.5	1.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Hexachloroethane (67-72-1)	625	0.5	1.0
Indeno(*1,2,3-cd*)Pyrene (193-39-5)	610/625	0.5	1.0
Isophorone (78-59-1)	625	0.5	1.0
3-Methyl cholanthrene (56-49-5)	625	2.0	8.0
Naphthalene (91-20-3)	625	0.3	0.6
Nitrobenzene (98-95-3)	625	0.5	1.0
N-Nitrosodimethylamine (62-75-9)	607/625	2.0	4.0
N-Nitrosodi-n-propylamine (621-64-7)	607/625	0.5	1.0
N-Nitrosodiphenylamine (86-30-6)	625	0.5	1.0
Perylene (198-55-0)	625	1.9	7.6
Phenanthrene (85-01-8)	625	0.3	0.6
Pyrene (129-00-0)	625	0.3	0.6
1,2,4-Trichlorobenzene (120-82-1)	625	0.3	0.6

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
DIOXIN			
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (176-40-16) (2,3,7,8 TCDD)	1613B	1.3 pg/L	5 pg/L

PRIORITY POLLUTANTS (continued)

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
PESTICIDES/PCBs			
Aldrin (309-00-2)	608	0.025	0.05
alpha-BHC (319-84-6)	608	0.025	0.05
beta-BHC (319-85-7)	608	0.025	0.05

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)[1] µg/L unless specified	Quantitation Level (QL)[2] µg/L unless specified
	PESTICIDES/PCBs		
gamma-BHC (58-89-9)	608	0.025	0.05
delta-BHC (319-86-8)	608	0.025	0.05
Chlordane (57-74-9)[8]	608	0.025	0.05
4,4'-DDT (50-29-3)	608	0.025	0.05
4,4'-DDE (72-55-9)	608	0.025	0.05[10]
4,4' DDD (72-54-8)	608	0.025	0.05
Dieldrin (60-57-1)	608	0.025	0.05
alpha-Endosulfan (959-98-8)	608	0.025	0.05
beta-Endosulfan (33213-65-9)	608	0.025	0.05
Endosulfan Sulfate (1031-07-8)	608	0.025	0.05
Endrin (72-20-8)	608	0.025	0.05
Endrin Aldehyde (7421-93-4)	608	0.025	0.05
Heptachlor (76-44-8)	608	0.025	0.05
Heptachlor Epoxide (1024-57-3)	608	0.025	0.05
PCB-1242 (53469-21-9)[9]	608	0.25	0.5
PCB-1254 (11097-69-1)	608	0.25	0.5
PCB-1221 (11104-28-2)	608	0.25	0.5
PCB-1232 (11141-16-5)	608	0.25	0.5
PCB-1248 (12672-29-6)	608	0.25	0.5
PCB-1260 (11096-82-5)	608	0.13	0.5
PCB-1016 (12674-11-2)[9]	608	0.13	0.5
Toxaphene (8001-35-2)	608	0.24	0.5

1. Detection level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

2. Quantitation Level (QL) also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to (1, 2, or 5) x 10^n, where n is an integer. (64 FR 30417). **ALSO GIVEN AS:** The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).
1.
3. Soluble Biochemical Oxygen Demand method note: First, filter the sample through a Millipore Nylon filter (or equivalent) - pore size of 0.45-0.50 um (prep all filters by filtering 250 ml of laboratory grade deionized water through the filter and discard). Then, analyze sample as per method 5210-B.
2.
4. NWTPH Dx - Northwest Total Petroleum Hydrocarbons Diesel Extended Range – see https://fortress.wa.gov/ecy/publications/documents/97602.pdf
3.
5. NWTPH Gx - Northwest Total Petroleum Hydrocarbons Gasoline Extended Range – see https://fortress.wa.gov/ecy/publications/documents/97602.pdf

6. 1, 3-dichloroproylene (mixed isomers) - You may report this parameter as two separate parameters: cis-1, 3-dichlorpropropene (10061-01-5) and trans-1, 3-dichloropropene (10061-02-6).

7. Total Benzofluoranthenes - Because Benzo(b)fluoranthene, Benzo(j)fluoranthene and Benzo(k)fluoranthene co-elute you may report these three isomers as total benzofluoranthenes.

8. Chlordane – You may report alpha-chlordane (5103-71-9) and gamma-chlordane (5103-74-2) in place of chlordane (57-74-9). If you report alpha and gamma-chlordane, the DL/PQLs that apply are 0.025/0.050.

9. PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.

SAMPLE RECEIPT/CHAIN-OF-CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 8/3/23 By: NB

SVL Work No: X3H0081

Item	Description	V	NA	Comments
1	Client or project name	✓		Avista - KFGS
2	Date and time of receipt at lab	✓		8/2/23 1100
3	Received by	✓		NB
4	Temperature blank or cooler temperature	✓		Temp 0.2 °C T098/T126
5	Were the sample(s) received on ice	✓		
6	Custody tape/bottle seals	✓		
7	Shipper's air bill	✓		Fedex 781929982295
8	Condition of samples upon receipt (leaking; bubbles in VOA vials)	✓		good
9	Analysis requested for each sample	✓		
10	Sample matrix description	✓		
11	The correct preservative for the analysis requested	✓		
12	Did an SVL employee preserve sample(s) upon receipt		✓	
13	Additional Information		✓	

V- Verified NA- Not Applicable

Comments:

Work Order: **X3I0316**
Landau Associates

LANDAU ASSOCIATES

Chain of Custody Record

907 ☒ **Spokane** (509) 327-9737
☐ **Portland** (503) 542-1080
☐

Date 9/15/23
Page 1 of 1

Turnaround Time:
Standard X
Accelerated

Project Name NPDES Permit Renewal
Project No. 023-0072-010
Project Location/Event KFLS / NPDES Permit Renewal Sampling
Sampler's Name Weston Boardman
Project Contact Shane Kostka / Landon Carlstrom
Send Results To

Testing Parameters

Special Handling Requirements:

Shipment Method: FedEx
Stored on ice: (Yes) / No

Sample I.D.	Date	Time	Matrix	No. of Containers	LOD SM5220-D
Outfall-001-09152323	9/15/23	09:15	water	1	X

Observations/Comments

__ Allow water samples to settle, collect aliquot from clear portion ☐

__ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐

__ Dissolved metal samples were field filtered

Other

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Weston Boardman	Printed Name Megan Bircher	Printed Name	Printed Name
Company Landau Associates	Company SVL	Company	Company
Date 9/15/23 Time 16:00	Date 09/19/23 Time 0910	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

SAMPLE RECEIPT/CHAIN-OF-CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 09/19/23 By: NB

SVL Work No: X3I0316

Item	Description	V	NA	Comments
1	Client or project name	✓		Landau Associates
2	Date and time of receipt at lab	✓		09/19/23 0910
3	Received by	✓		NB
4	Temperature blank or cooler temperature	✓		Temp. 2.3°C T098/T126
5	Were the sample(s) received on ice	✓		
6	Custody tape/bottle seals	✓	✓	09/19/23 NB
7	Shipper's air bill	✓		
8	Condition of samples upon receipt (leaking; bubbles in VOA vials)	✓		good
9	Analysis requested for each sample	✓		
10	Sample matrix description	✓		
11	The correct preservative for the analysis requested	✓		
12	Did an SVL employee preserve sample(s) upon receipt		✓	
13	Additional Information		✓	

V- Verified

Comments:

SVL ANALYTICAL
1 GOVERNMENT GULCH
KELLOGG ID 83837

P: NORTH S: NORTH I: 5B
KELL – 1363
1Z497Y9V031310 4435
DWW1KMB IDCOEG03UDC SEP 19 03:38:35 2023
US 8380 HIP 23.6.0 ZT411R

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
Outfall-001-073123	X3H0081-01	Water	31-Jul-23 10:16	WB	02-Aug-2023	
Outfall-001-080123	X3H0081-02	Water	01-Aug-23 11:05		02-Aug-2023	

Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Client Sample ID: **Outfall-001-073123**
SVL Sample ID: **X3H0081-01 (Water)**

Sample Report Page 1 of 1

Sampled: 31-Jul-23 10:16
Received: 02-Aug-23
Sampled By: WB

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.8	Aluminum	< 0.0100	mg/L	0.0100	0.0040	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Antimony**	0.00189	mg/L	0.00100	0.00072	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Arsenic**	0.00753	mg/L	0.00100	0.00021	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Barium**	0.238	mg/L	0.00040	0.00014	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	Beryllium	< 0.000160	mg/L	0.000160	0.000065	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	Cadmium	< 0.000100	mg/L	0.000100	0.000063	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Chromium**	0.00347	mg/L	0.00100	0.00017	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	Cobalt	< 0.000100	mg/L	0.000100	0.000027	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Copper**	0.00275	mg/L	0.00040	0.00036	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Iron**	0.026	mg/L	0.015	0.005	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	Lead	< 0.00020	mg/L	0.00020	0.00014	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Manganese**	0.00325	mg/L	0.00040	0.00033	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Nickel**	0.00095	mg/L	0.00060	0.00012	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Selenium**	0.00178	mg/L	0.00100	0.00024	2	X332073	SMU	08/14/23 12:41	
EPA 200.8	Silver	< 0.00008	mg/L	0.00008	0.000061	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	Thallium	< 0.000200	mg/L	0.000200	0.00008	2	X332073	SMU	08/14/23 11:35	
EPA 200.8	**Zinc**	0.0056	mg/L	0.0040	0.0020	2	X332073	SMU	08/14/23 11:35	
Classical Chemistry Parameters										
SM 2540 D	**Total Susp. Solids**	11.0	mg/L	5.0			X331211	TJL	08/07/23 15:10	

This data has been reviewed for accuracy and has been authorized for release.

Dave Tryon
Project Manager

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Client Sample ID: **Outfall-001-080123**
SVL Sample ID: **X3H0081-02 (Water)**

Sample Report Page 1 of 1

Sampled: 01-Aug-23 11:05
Received: 02-Aug-23
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 1631E	**Mercury**	4.73	ng/L	0.500	0.120		X332263	NMS	08/10/23 16:18	
Classical Chemistry Parameters										
EPA 335.4	Cyanide (total)	< 0.0050	mg/L	0.0050	0.0038		X332031	JRR	08/11/23 14:29	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X331216	HJL	08/07/23 14:15	
EPA 410.4	**Chemical Oxygen Demand**	14.2	mg/L	5.0	2.0		X332111	DD	08/08/23 16:17	
EPA 410.4	**Chemical Oxygen Demand**	7.7	mg/L	5.0	2.0		X336001	NMS	09/05/23 13:02	H3
SM 5310B	**Total Organic Carbon**	2.88	mg/L	1.00	0.38		X331073	KAG	08/08/23 04:27	

This data has been reviewed for accuracy and has been authorized for release.

Dave Tryon
Project Manager

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 1631E	Mercury	ng/L	<0.500	0.120	0.500	X332263	10-Aug-23	
EPA 1631E	Mercury	ng/L	<0.500	0.120	0.500	X332263	10-Aug-23	
EPA 1631E	Mercury	ng/L	<0.500	0.120	0.500	X332263	10-Aug-23	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)								
EPA 200.8	Aluminum	mg/L	<0.0100	0.0040	0.0100	X332073	14-Aug-23	
EPA 200.8	Antimony	mg/L	<0.00100	0.00072	0.00100	X332073	14-Aug-23	
EPA 200.8	Arsenic	mg/L	<0.00100	0.00021	0.00100	X332073	14-Aug-23	
EPA 200.8	Barium	mg/L	<0.00040	0.00014	0.00040	X332073	14-Aug-23	
EPA 200.8	Beryllium	mg/L	<0.000160	0.000065	0.000160	X332073	14-Aug-23	
EPA 200.8	Cadmium	mg/L	<0.000100	0.000063	0.000100	X332073	14-Aug-23	
EPA 200.8	Chromium	mg/L	<0.00100	0.00017	0.00100	X332073	14-Aug-23	
EPA 200.8	Cobalt	mg/L	<0.000100	0.000027	0.000100	X332073	14-Aug-23	
EPA 200.8	Copper	mg/L	<0.00040	0.00036	0.00040	X332073	14-Aug-23	
EPA 200.8	Iron	mg/L	<0.015	0.005	0.015	X332073	14-Aug-23	
EPA 200.8	Lead	mg/L	<0.00020	0.00014	0.00020	X332073	14-Aug-23	
EPA 200.8	Manganese	mg/L	<0.00040	0.00033	0.00040	X332073	15-Aug-23	
EPA 200.8	Nickel	mg/L	<0.00060	0.00012	0.00060	X332073	14-Aug-23	
EPA 200.8	Selenium	mg/L	<0.00100	0.00024	0.00100	X332073	14-Aug-23	
EPA 200.8	Silver	mg/L	<0.00008	0.000061	0.00008	X332073	14-Aug-23	
EPA 200.8	Thallium	mg/L	<0.000200	0.00008	0.000200	X332073	14-Aug-23	
EPA 200.8	Zinc	mg/L	<0.0040	0.0020	0.0040	X332073	14-Aug-23	
Classical Chemistry Parameters								
EPA 335.4	Cyanide (total)	mg/L	<0.0050	0.0038	0.0050	X332031	11-Aug-23	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X331216	07-Aug-23	
EPA 410.4	Chemical Oxygen Demand	mg/L	<5.0	2.0	5.0	X332111	08-Aug-23	
EPA 410.4	Chemical Oxygen Demand	mg/L	<5.0	2.0	5.0	X336001	05-Sep-23	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X331211	07-Aug-23	
SM 5310B	Total Organic Carbon	mg/L	<1.00	0.38	1.00	X331073	07-Aug-23	
SM 5310B	Total Organic Carbon	mg/L	<1.00	0.38	1.00	X331073	07-Aug-23	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)									
EPA 1631E	Mercury	ng/L	4.97	5.00	99.5	77 - 123	X332263	10-Aug-23	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)									
EPA 200.8	Aluminum	mg/L	0.195	0.195	100	85 - 115	X332073	14-Aug-23	
EPA 200.8	Antimony	mg/L	0.0248	0.0250	99.4	85 - 115	X332073	14-Aug-23	
EPA 200.8	Arsenic	mg/L	0.0261	0.0250	104	85 - 115	X332073	14-Aug-23	
EPA 200.8	Barium	mg/L	0.0252	0.0250	101	85 - 115	X332073	14-Aug-23	
EPA 200.8	Beryllium	mg/L	0.0240	0.0250	96.1	85 - 115	X332073	14-Aug-23	
EPA 200.8	Cadmium	mg/L	0.0246	0.0250	98.2	85 - 115	X332073	14-Aug-23	
EPA 200.8	Chromium	mg/L	0.0260	0.0250	104	85 - 115	X332073	14-Aug-23	
EPA 200.8	Cobalt	mg/L	0.0260	0.0250	104	85 - 115	X332073	14-Aug-23	
EPA 200.8	Copper	mg/L	0.0261	0.0250	104	85 - 115	X332073	14-Aug-23	
EPA 200.8	Iron	mg/L	0.204	0.195	104	85 - 115	X332073	14-Aug-23	
EPA 200.8	Lead	mg/L	0.0249	0.0250	99.7	85 - 115	X332073	14-Aug-23	
EPA 200.8	Manganese	mg/L	0.0264	0.0250	106	85 - 115	X332073	14-Aug-23	

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136) (Continued)									
EPA 200.8	Nickel	mg/L	0.0256	0.0250	103	85 - 115	X332073	14-Aug-23	
EPA 200.8	Selenium	mg/L	0.0222	0.0250	88.9	85 - 115	X332073	14-Aug-23	
EPA 200.8	Silver	mg/L	0.0250	0.0250	99.8	85 - 115	X332073	14-Aug-23	
EPA 200.8	Thallium	mg/L	0.0247	0.0250	98.8	85 - 115	X332073	14-Aug-23	
EPA 200.8	Zinc	mg/L	0.0258	0.0250	103	85 - 115	X332073	14-Aug-23	
Classical Chemistry Parameters									
EPA 335.4	Cyanide (total)	mg/L	0.102	0.100	102	90 - 110	X332031	11-Aug-23	
EPA 350.1	Ammonia as N	mg/L	1.06	1.00	106	90 - 110	X331216	07-Aug-23	
EPA 410.4	Chemical Oxygen Demand	mg/L	101	100	101	90 - 110	X336001	05-Sep-23	
EPA 410.4	Chemical Oxygen Demand	mg/L	108	100	108	90 - 110	X332111	08-Aug-23	
SM 2540 D	Total Susp. Solids	mg/L	10.0	10.0	100	85 - 115	X331211	07-Aug-23	
SM 5310B	Total Organic Carbon	mg/L	32.5	34.3	94.9	90 - 110	X331073	07-Aug-23	
SM 5310B	Total Organic Carbon	mg/L	32.9	34.3	95.8	90 - 110	X331073	07-Aug-23	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X331211 - X3H0069-02	07-Aug-23	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X331211 - X3H0079-01	07-Aug-23	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Total)										
EPA 1631E	Mercury	ng/L	2.88	<0.500	2.50	97.5	71 - 125	X332263 - X3H0145-01	10-Aug-23	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.8	Aluminum	mg/L	0.296	0.0987	0.195	101	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Aluminum	mg/L	0.366	0.150	0.195	111	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Antimony	mg/L	0.0369	0.0122	0.0250	99.1	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Antimony	mg/L	0.0362	0.0114	0.0250	99.2	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Arsenic	mg/L	0.0318	0.00622	0.0250	102	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Arsenic	mg/L	0.0316	0.00582	0.0250	103	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Barium	mg/L	0.0999	0.0763	0.0250	94.3	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Barium	mg/L	0.0499	0.0246	0.0250	101	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Beryllium	mg/L	0.0235	<0.000160	0.0250	94.0	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Beryllium	mg/L	0.0230	<0.000160	0.0250	91.9	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Cadmium	mg/L	0.0258	0.000517	0.0250	101	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Cadmium	mg/L	0.0252	0.000469	0.0250	99.1	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Chromium	mg/L	0.0261	<0.00100	0.0250	104	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Chromium	mg/L	0.0256	<0.00100	0.0250	102	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Cobalt	mg/L	0.0264	0.000787	0.0250	102	70 - 130	X332073 - X3H0109-01	14-Aug-23	

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136) (Continued)										
EPA 200.8	Cobalt	mg/L	0.0259	0.000266	0.0250	103	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Copper	mg/L	0.0324	0.00664	0.0250	103	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Copper	mg/L	0.0362	0.00996	0.0250	105	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Iron	mg/L	0.382	0.182	0.195	103	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Iron	mg/L	0.507	0.294	0.195	109	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Lead	mg/L	0.117	0.0918	0.0250	99.0	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Lead	mg/L	0.127	0.101	0.0250	103	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Manganese	mg/L	0.143	0.118	0.0250	100	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Manganese	mg/L	0.0762	0.0494	0.0250	107	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Nickel	mg/L	0.0295	0.00454	0.0250	99.8	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Nickel	mg/L	0.0272	0.00223	0.0250	99.8	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Selenium	mg/L	0.0244	0.00153	0.0250	91.6	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Selenium	mg/L	0.0288	0.00200	0.0250	107	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Silver	mg/L	0.0252	0.000091	0.0250	100	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Silver	mg/L	0.0244	0.000128	0.0250	96.9	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Thallium	mg/L	0.0257	<0.000200	0.0250	102	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Thallium	mg/L	0.0252	<0.000200	0.0250	100	70 - 130	X332073 - X3H0109-07	14-Aug-23	
EPA 200.8	Zinc	mg/L	0.217	0.193	0.0250	97.6	70 - 130	X332073 - X3H0109-01	14-Aug-23	
EPA 200.8	Zinc	mg/L	0.218	0.187	0.0250	122	70 - 130	X332073 - X3H0109-07	14-Aug-23	
Classical Chemistry Parameters										
EPA 335.4	Cyanide (total)	mg/L	0.110	<0.0050	0.100	110	90 - 110	X332031 - X3H0081-02	11-Aug-23	
EPA 335.4	Cyanide (total)	mg/L	0.0975	<0.0050	0.100	97.5	90 - 110	X332031 - X3H0085-01	11-Aug-23	
EPA 350.1	Ammonia as N	mg/L	1.06	<0.030	1.00	106	90 - 110	X331216 - X3H0074-03	07-Aug-23	
EPA 350.1	Ammonia as N	mg/L	1.08	0.033	1.00	105	90 - 110	X331216 - X3H0029-01	07-Aug-23	
EPA 410.4	Chemical Oxygen Dema	mg/L	61.4	17.2	50.0	88.4	90 - 110	X336001 - X3H0416-02	05-Sep-23	M2
EPA 410.4	Chemical Oxygen Dema	mg/L	62.1	10.9	50.0	103	90 - 110	X336001 - X3H0416-01	05-Sep-23	
EPA 410.4	Chemical Oxygen Dema	mg/L	63.1	<5.0	50.0	126	90 - 110	X332111 - X3H0004-03	08-Aug-23	M1
EPA 410.4	Chemical Oxygen Dema	mg/L	53.5	5.8	50.0	95.5	90 - 110	X332111 - X3H0133-03	08-Aug-23	
SM 5310B	Total Organic Carbon	mg/L	11.8	2.10	10.0	96.7	80 - 120	X331073 - X3H0073-04	08-Aug-23	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Total)										
EPA 1631E	Mercury	ng/L	2.94	2.88	2.50	2.0	24	99.8	X332263 - X3H0145-01	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.8	Aluminum	mg/L	0.287	0.296	0.195	2.9	20	96.7	X332073 - X3H0109-01	
EPA 200.8	Antimony	mg/L	0.0373	0.0369	0.0250	0.9	20	100	X332073 - X3H0109-01	
EPA 200.8	Arsenic	mg/L	0.0324	0.0318	0.0250	1.7	20	105	X332073 - X3H0109-01	
EPA 200.8	Barium	mg/L	0.101	0.0999	0.0250	1.0	20	98.2	X332073 - X3H0109-01	
EPA 200.8	Beryllium	mg/L	0.0236	0.0235	0.0250	0.3	20	94.2	X332073 - X3H0109-01	
EPA 200.8	Cadmium	mg/L	0.0259	0.0258	0.0250	0.1	20	101	X332073 - X3H0109-01	
EPA 200.8	Chromium	mg/L	0.0263	0.0261	0.0250	0.7	20	105	X332073 - X3H0109-01	
EPA 200.8	Cobalt	mg/L	0.0272	0.0264	0.0250	3.1	20	106	X332073 - X3H0109-01	
EPA 200.8	Copper	mg/L	0.0337	0.0324	0.0250	3.9	20	108	X332073 - X3H0109-01	
EPA 200.8	Iron	mg/L	0.394	0.382	0.195	3.1	20	109	X332073 - X3H0109-01	
EPA 200.8	Lead	mg/L	0.116	0.117	0.0250	0.3	20	97.5	X332073 - X3H0109-01	
EPA 200.8	Manganese	mg/L	0.146	0.143	0.0250	2.4	20	114	X332073 - X3H0109-01	

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136) (Continued)										
EPA 200.8	Nickel	mg/L	0.0303	0.0295	0.0250	2.6	20	103	X332073 - X3H0109-01	
EPA 200.8	Selenium	mg/L	0.0240	0.0244	0.0250	1.9	20	89.8	X332073 - X3H0109-01	
EPA 200.8	Silver	mg/L	0.0250	0.0252	0.0250	0.9	20	99.5	X332073 - X3H0109-01	
EPA 200.8	Thallium	mg/L	0.0257	0.0257	0.0250	0.3	20	102	X332073 - X3H0109-01	
EPA 200.8	Zinc	mg/L	0.225	0.217	0.0250	3.6	20	129	X332073 - X3H0109-01	
Classical Chemistry Parameters										
EPA 335.4	Cyanide (total)	mg/L	0.104	0.110	0.100	5.7	20	104	X332031 - X3H0081-02	
EPA 350.1	Ammonia as N	mg/L	1.08	1.06	1.00	2.2	20	108	X331216 - X3H0074-03	
EPA 410.4	Chemical Oxygen Demand	mg/L	55.4	63.1	50.0	13.0	20	111	X332111 - X3H0004-03	M1
EPA 410.4	Chemical Oxygen Demand	mg/L	69.4	61.4	50.0	12.2	20	104	X336001 - X3H0416-02	
SM 5310B	Total Organic Carbon	mg/L	11.7	11.8	10.0	0.4	20	96.2	X331073 - X3H0073-04	

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3H0081**
Reported: 17-Nov-23 15:44

Notes and Definitions

H3	Sample was received and/or analysis requested past holding time.
H3a	Sample was received past holding time.
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Client:	Landau Associates, Inc. - Spokane	Work Order:	MDH0350
Address:	10 N Post, Suite 218	Project:	X3H0081
	Spokane, WA 99201	Reported:	8/25/2023 16:13
Attn:	Dave Tryon		

Analytical Results Report

Sample Location:	X3H0081-01 (Outfall-001-073123)		
Lab/Sample Number:	MDH0350-01	Collect Date:	07/31/23 10:16
Date Received:	08/09/23 10:04	Collected By:	WB
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
Aroclor 1016 (PCB-1016)	ND	ug/L	0.200	8/15/23 5:11	GPB	EPA 608.3	H3
Aroclor 1221 (PCB-1221)	ND	ug/L	0.200	8/15/23 4:54	GPB	EPA 608.3	H3
Aroclor 1232 (PCB-1232)	ND	ug/L	0.200	8/15/23 4:54	GPB	EPA 608.3	H3
Aroclor 1242 (PCB-1242)	ND	ug/L	0.200	8/15/23 4:54	GPB	EPA 608.3	H3
Aroclor 1248 (PCB-1248)	ND	ug/L	0.200	8/15/23 4:54	GPB	EPA 608.3	H3
Aroclor 1254 (PCB-1254)	ND	ug/L	0.200	8/15/23 4:54	GPB	EPA 608.3	H3
Aroclor 1260 (PCB-1260)	ND	ug/L	0.200	8/15/23 4:54	GPB	EPA 608.3	H3
Surrogate: DCB	*62.7%*		*40-130*	*8/15/23 4:54*	*GPB*	*EPA 608.3*	*H3*
1,2,4-Trichlorobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,2-Dichlorobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,2-Dinitrobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,2-Diphenyl hydrazine	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,3-Dichlorobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,3-Dinitrobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,4-Dichlorobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1,4-Dinitrobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
1-Methylnaphthalene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,3,4,6-Tetrachlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,3,5,6-Tetrachlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,4,5-Trichlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,4,6-Trichlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,4-Dichlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,4-Dimethylphenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,4-Dinitrophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,4-Dinitrotoluene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2,6-Dinitrotoluene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2-Chloronaphthalene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2-Chlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2-Methylnaphthalene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2-Methylphenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2-Nitroaniline	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
2-Nitrophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
3,3'-Dichlorobenzidine	ND	ug/L	1.00	8/24/23 19:34	MAH	EPA 625.1	H3
3+4-Methylphenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
3-Nitroaniline	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
4,6-Dinitro-2-methylphenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
4-Bromophenyl-phenylether	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Analytical Results Report
(Continued)

Sample Location: X3H0081-01 (Outfall-001-073123)
Lab/Sample Number: MDH0350-01 Collect Date: 07/31/23 10:16
Date Received: 08/09/23 10:04 Collected By: WB
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles (Continued)							
4-Chloro-3-methylphenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
4-Chloroaniline	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
4-Chlorophenyl phenyl ether	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
4-Nitroaniline	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
4-Nitrophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Acenaphthene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Acenaphthylene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Aniline	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Anthracene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Benzidine	ND	ug/L	1.00	8/24/23 19:34	MAH	EPA 625.1	H3
Benzo[a]anthracene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Benzo[a]pyrene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Benzo[b]fluoranthene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Benzo[ghi]perylene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Benzo[k]fluoranthene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Benzyl alcohol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
bis(2-chloro-1-methylethyl)ether	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
bis(2-Chloroethoxy)methane	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
bis(2-Chloroethyl)ether	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Butyl benzyl phthalate	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Carbazole	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Chrysene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Dibenz[a,h]anthracene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Dibenzofuran	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Diethyl phthalate	1.01	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Dimethyl phthalate	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Di-n-butyl phthalate	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Di-n-octyl phthalate	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Fluoranthene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Fluorene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Hexachlorobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Hexachlorobutadiene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Hexachlorocyclopentadiene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Hexachloroethane	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Isophorone	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Naphthalene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Nitrobenzene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
n-Nitrosodimethylamine	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
n-Nitroso-di-n-propylamine	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
n-Nitrosodiphenylamine	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Pentachlorophenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Phenanthrene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Phenol	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Pyrene	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Analytical Results Report
(Continued)

Sample Location:	X3H0081-01 (Outfall-001-073123)		
Lab/Sample Number:	MDH0350-01	Collect Date:	07/31/23 10:16
Date Received:	08/09/23 10:04	Collected By:	WB
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles (Continued)							
Pyridine	ND	ug/L	0.500	8/24/23 19:34	MAH	EPA 625.1	H3
Surrogate: 2,4,6-Tribromophenol	*93.0%*		*47-122*	*8/24/23 19:34*	*MAH*	*EPA 625.1*	*H3*
Surrogate: 2-Fluorobiphenyl	*73.5%*		*49-115*	*8/24/23 19:34*	*MAH*	*EPA 625.1*	*H3*
Surrogate: 2-Fluorophenol	*78.9%*		*30-115*	*8/24/23 19:34*	*MAH*	*EPA 625.1*	*H3*
Surrogate: Nitrobenzene-d5	*72.6%*		*51-110*	*8/24/23 19:34*	*MAH*	*EPA 625.1*	*H3*
Surrogate: Phenol-2,3,4,5,6-d5	*83.4%*		*40-120*	*8/24/23 19:34*	*MAH*	*EPA 625.1*	*H3*
Surrogate: Terphenyl-d14	*95.6%*		*50-130*	*8/24/23 19:34*	*MAH*	*EPA 625.1*	*H3*

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Analytical Results Report
(Continued)

Sample Location: X3H0081-02 (Outfall-001-080123)
Lab/Sample Number: MDH0350-02 Collect Date: 08/01/23 11:05
Date Received: 08/09/23 10:04 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Phenolics	ND	mg/L	0.0500	8/18/23 9:00	DTA	EPA 420.1	
Semivolatiles							
HEM	ND	mg/L	1.00	8/10/23 12:30	TAZ	EPA 1664B	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,1,1-Trichloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,1,2-Trichloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,1-Dichloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,1-Dichloroethene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,1-dichloropropene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2,3-Trichloropropane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2-Dichlorobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2-Dichloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,2-Dichloropropane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,3-Dichlorobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,3-Dichloropropane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
1,4-Dichlorobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
2,2-Dichloropropane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
2-Chlorotoluene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
2-hexanone	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
4-Chlorotoluene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Acetone	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Acrolein	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Acrylonitrile	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Benzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Bromobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Bromochloromethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Bromodichloromethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Bromoform	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Bromomethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Carbon disulfide	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Carbon Tetrachloride	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Chlorobenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Chloroethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Chloroform	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Chloromethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
cis-1,2-dichloroethene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Analytical Results Report
(Continued)

Sample Location: X3H0081-02 (Outfall-001-080123)
Lab/Sample Number: MDH0350-02 Collect Date: 08/01/23 11:05
Date Received: 08/09/23 10:04 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
cis-1,3-Dichloropropene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Dibromochloromethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Dibromomethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Dichlorodifluoromethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Ethylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Hexachlorobutadiene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Iodomethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Isopropylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
m+p-Xylene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Methylene chloride	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
methyl-t-butyl ether (MTBE)	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Naphthalene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
n-Butylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
n-Propylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
o-Xylene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
p-isopropyltoluene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
sec-Butylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Styrene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
tert-Butylbenzene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Tetrachloroethene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Toluene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Total Xylene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
trans-1,2-Dichloroethene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
trans-1,3-Dichloropropene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
trans-1-4-Dichloro-2-butene	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Trichloroethene	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Trichlorofluoromethane	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Vinyl acetate	ND	ug/L	2.50	8/11/23 19:53	BKP	EPA 624.1	
Vinyl Chloride	ND	ug/L	0.500	8/11/23 19:53	BKP	EPA 624.1	
Surrogate: 1,2-Dichlorobenzene-d4	*99.3%*		*70-130*	*8/11/23 19:53*	*BKP*	*EPA 624.1*	
Surrogate: 1,2-Dichloroethane-d4	*93.5%*		*70-130*	*8/11/23 19:53*	*BKP*	*EPA 624.1*	
Surrogate: 4-Bromofluorobenzene	*109%*		*70-130*	*8/11/23 19:53*	*BKP*	*EPA 624.1*	
Surrogate: Toluene-d8	*101%*		*70-130*	*8/11/23 19:53*	*BKP*	*EPA 624.1*	

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Authorized Signature,

Justin Doty For Todd Taruscio, Laboratory Manager

H3	Sample was received past holding time.
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0798 - Inorganics										
Blank (BDH0798-BLK1)					Prepared & Analyzed: 8/18/2023					
Phenolics	ND		0.0500	mg/L						
LCS (BDH0798-BS1)					Prepared & Analyzed: 8/18/2023					
Phenolics	0.359		0.0500	mg/L	0.400		89.8	85-115		
Matrix Spike (BDH0798-MS1)		**Source: MDG0833-04**			Prepared & Analyzed: 8/18/2023					
Phenolics	0.359		0.0500	mg/L	0.400	ND	89.8	70-130		

Quality Control Data

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0437 - HEM										
Blank (BDH0437-BLK1)					Prepared & Analyzed: 8/10/2023					
HEM	ND		1.00	mg/L						
LCS (BDH0437-BS1)					Prepared & Analyzed: 8/10/2023					
HEM	36.6		1.00	mg/L	40.0		91.5	78-114		
LCS Dup (BDH0437-BSD1)					Prepared & Analyzed: 8/10/2023					
HEM	36.7		1.00	mg/L	40.0		91.8	78-114	0.273	18
Matrix Spike (BDH0437-MS1)		**Source: MDH0236-01**			Prepared & Analyzed: 8/10/2023					
HEM	40.3		1.00	mg/L	40.0	3.17	92.8	71-116		
Matrix Spike Dup (BDH0437-MSD1)		**Source: MDH0236-01**			Prepared & Analyzed: 8/10/2023					
HEM	41.1		1.00	mg/L	40.0	3.17	94.8	71-116	1.97	18
Batch: BDH0540 - Pesticides										
Blank (BDH0540-BLK1)					Prepared: 8/14/2023 Analyzed: 8/15/2023					
Arochlor 1016 (1)	ND		0.200	ug/L						
Arochlor 1221 (1)	ND		0.200	ug/L						
Arochlor 1232 (1)	ND		0.200	ug/L						
Arochlor 1242 (1)	ND		0.200	ug/L						
Arochlor 1248 (1)	ND		0.200	ug/L						
Arochlor 1254 (1)	ND		0.200	ug/L						
Arochlor 1260 (1)	ND		0.200	ug/L						
Surrogate: DCB			*1.20*	*ug/L*	*1.25*		*96.3*	*40-130*		
LCS (BDH0540-BS1)					Prepared: 8/14/2023 Analyzed: 8/15/2023					
Arochlor 1016 (1)	5.36		0.200	ug/L	5.00		107	70-130		
Arochlor 1260 (1)	5.25		0.200	ug/L	5.00		105	70-130		
Surrogate: DCB			*1.18*	*ug/L*	*1.25*		*94.3*	*40-130*		

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0540 - Pesticides (Continued)										
LCS Dup (BDH0540-BSD1)					Prepared: 8/14/2023 Analyzed: 8/15/2023					
Arochlor 1016 (1)	5.73		0.200	ug/L	5.00		115	70-130	6.83	20
Arochlor 1260 (1)	5.31		0.200	ug/L	5.00		106	70-130	1.10	20
Surrogate: DCB			*1.16*	*ug/L*	*1.25*		*93.0*	*40-130*		
Batch: BDH1033 - SVOC Water										
Blank (BDH1033-BLK1)					Prepared: 8/9/2023 Analyzed: 8/24/2023					
Di-n-butyl phthalate	ND		0.500	ug/L						
Dimethyl phthalate	ND		0.500	ug/L						
Diethyl phthalate	ND		0.500	ug/L						
Dibenzofuran	ND		0.500	ug/L						
Dibenz(a,h)anthracene	ND		0.500	ug/L						
Chrysene	ND		0.500	ug/L						
Carbazole	ND		0.500	ug/L						
Benzyl Butyl Phthalate	ND		0.500	ug/L						
Di (2-ethylhexyl) phthalate	ND		0.500	ug/L						
bis(2-Chloroethyl)ether	ND		0.500	ug/L						
bis(2-Chloroethoxy)methane	ND		0.500	ug/L						
bis(2-chloro-1-methylethyl)ether	ND		0.500	ug/L						
Benzyl alcohol	ND		0.500	ug/L						
Benzo[k]fluoranthene	ND		0.500	ug/L						
Benzo(g,h,i)perylene	ND		0.500	ug/L						
Benzo[b]fluoranthene	ND		0.500	ug/L						
Benzo[a]anthracene	ND		0.500	ug/L						
Di-n-octyl phthalate	ND		0.500	ug/L						
n-Nitrosodimethylamine	ND		0.500	ug/L						
Benzo[a]pyrene	ND		0.500	ug/L						
Benzidine	ND		1.00	ug/L						
Pyridine	ND		0.500	ug/L						
Pyrene	ND		0.500	ug/L						
Phenol	ND		0.500	ug/L						
Phenanthrene	ND		0.500	ug/L						
Pentachlorophenol	ND		0.500	ug/L						
n-Nitrosodiphenylamine	ND		0.500	ug/L						
Nitrobenzene	ND		0.500	ug/L						
Fluoranthene	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
Isophorone	ND		0.500	ug/L						
Indeno(1,2,3-cd)pyrene	ND		0.500	ug/L						
Hexachloroethane	ND		0.500	ug/L						
Hexachlorocyclopentadiene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
Hexachlorobenzene	ND		0.500	ug/L						
Fluorene	ND		0.500	ug/L						
n-Nitroso-di-n-propylamine	ND		0.500	ug/L						
1-Methylnaphthalene	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2,4-Dinitrophenol	ND		0.500	ug/L						
2,4-Dimethylphenol	ND		0.500	ug/L						
2,4-Dichlorophenol	ND		0.500	ug/L						

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH1033 - SVOC Water (Continued)										
Blank (BDH1033-BLK1)					Prepared: 8/9/2023 Analyzed: 8/24/2023					
2,4,6-Trichlorophenol	ND		0.500	ug/L						
2,4,5-Trichlorophenol	ND		0.500	ug/L						
4-Bromophenyl-phenylether	ND		0.500	ug/L						
2,3,4,6-Tetrachlorophenol	ND		0.500	ug/L						
2-Chlorophenol	ND		0.500	ug/L						
1,4-Dinitrobenzene	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
1,2-Diphenyl hydrazine	ND		0.500	ug/L						
1,2-Dinitrobenzene	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
2,3,5,6-Tetrachlorophenol	ND		0.500	ug/L						
4,6-Dinitro-2-methylphenol	ND		0.500	ug/L						
Aniline	ND		0.500	ug/L						
Acenaphthylene	ND		0.500	ug/L						
Acenaphthene	ND		0.500	ug/L						
4-Nitrophenol	ND		0.500	ug/L						
4-Nitroaniline	ND		0.500	ug/L						
4-Chlorophenyl-phenylether	ND		0.500	ug/L						
4-Chloroaniline	ND		0.500	ug/L						
4-Chloro-3-methylphenol	ND		0.500	ug/L						
2,6-Dinitrotoluene	ND		0.500	ug/L						
3-Nitroaniline	ND		0.500	ug/L						
2-Chloronaphthalene	ND		0.500	ug/L						
3,3'-Dichlorobenzidine	ND		1.00	ug/L						
2-Nitrophenol	ND		0.500	ug/L						
2-Nitroaniline	ND		0.500	ug/L						
2-Methylphenol	ND		0.500	ug/L						
2-Methylnaphthalene	ND		0.500	ug/L						
Anthracene	ND		0.500	ug/L						
3+4-Methylphenol	ND		0.500	ug/L						
Surrogate: Phenol-2,3,4,5,6-d5			*38.7*	*ug/L*	*50.0*		*77.4*	*40-120*		
Surrogate: Nitrobenzene-d5			*22.3*	*ug/L*	*25.0*		*89.1*	*51-110*		
Surrogate: Terphenyl-d14			*28.4*	*ug/L*	*25.0*		*114*	*50-130*		
Surrogate: 2-Fluorophenol			*37.4*	*ug/L*	*50.0*		*74.7*	*30-115*		
Surrogate: 2-Fluorobiphenyl			*20.8*	*ug/L*	*25.0*		*83.2*	*49-115*		
Surrogate: 2,4,6-Tribromophenol			*28.6*	*ug/L*	*50.0*		*57.1*	*47-122*		

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH1033 - SVOC Water (Continued)										
LCS (BDH1033-BS1)					Prepared: 8/9/2023 Analyzed: 8/24/2023					
Di (2-ethylhexyl) phthalate	5.42		0.500	ug/L	5.00		108	61-141		
Di-n-butyl phthalate	5.30		0.500	ug/L	5.00		106	70-125		
Dimethyl phthalate	5.20		0.500	ug/L	5.00		104	70-120		
Diethyl phthalate	5.21		0.500	ug/L	5.00		104	70-120		
Dibenzofuran	5.07		0.500	ug/L	5.00		101	70-120		
Dibenz(a,h)anthracene	4.24		0.500	ug/L	5.00		84.8	64-120		
Chrysene	5.34		0.500	ug/L	5.00		107	70-120		
m-Dichlorobenzene	4.89		0.500	ug/L	5.00		97.8	64-120		
Benzyl Butyl Phthalate	5.28		0.500	ug/L	5.00		106	63-133		
Hexachlorobutadiene	4.92		0.500	ug/L	5.00		98.4	65-120		
bis(2-Chloroethyl)ether	5.38		0.500	ug/L	5.00		108	70-120		
bis(2-Chloroethoxy)methane	5.10		0.500	ug/L	5.00		102	70-120		
bis(2-chloro-1-methylethyl)ether	4.98		0.500	ug/L	5.00		99.6	67-120		
1,2,4-Trichlorobenzene	4.87		0.500	ug/L	5.00		97.4	67-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	4.90		0.500	ug/L	5.00		98.0	65-120		
1,2-Dinitrobenzene	5.19		0.500	ug/L	5.00		104	70-120		
Carbazole	5.62		0.500	ug/L	5.00		112	70-120		
n-Nitroso-di-n-propylamine	5.17		0.500	ug/L	5.00		103	68-120		
Benzo[k]fluoranthene	5.61		0.500	ug/L	5.00		112	70-122		
Pyrene	5.31		0.500	ug/L	5.00		106	62-125		
Phenol	5.06		0.500	ug/L	5.00		101	54-120		
Phenanthrene	5.04		0.500	ug/L	5.00		101	70-120		
Fluoranthene	5.02		0.500	ug/L	5.00		100	70-120		
n-Nitrosodiphenylamine	5.10		0.500	ug/L	5.00		102	69-120		
Hexachlorobenzene	5.08		0.500	ug/L	5.00		102	69-120		
Nitrobenzene	4.68		0.500	ug/L	5.00		93.6	70-120		
Naphthalene	4.86		0.500	ug/L	5.00		97.2	70-120		
Isophorone	5.20		0.500	ug/L	5.00		104	70-120		
Indeno(1,2,3-cd)pyrene	4.21		0.500	ug/L	5.00		84.2	67-120		
Hexachloroethane	4.95		0.500	ug/L	5.00		99.0	64-120		
Di-n-octyl phthalate	5.52		0.500	ug/L	5.00		110	44-126		
Pentachlorophenol	5.31		0.500	ug/L	5.00		106	61-120		
4-Nitrophenol	5.11		0.500	ug/L	5.00		102	47-125		
2-Nitroaniline	5.21		0.500	ug/L	5.00		104	70-120		
2-Nitrophenol	4.63		0.500	ug/L	5.00		92.6	68-120		
3+4-Methylphenol	4.77		0.500	ug/L	5.00		95.4	68-120		
4,6-Dinitro-2-methylphenol	5.57		0.500	ug/L	5.00		111	40-140		
4-Bromophenyl-phenylether	5.18		0.500	ug/L	5.00		104	69-120		
4-Chloro-3-methylphenol	4.90		0.500	ug/L	5.00		98.0	70-120		
4-Chloroaniline	3.34		0.500	ug/L	5.00		66.8	30-130		
2-Methylphenol	4.45		0.500	ug/L	5.00		89.0	61-120		
4-Nitroaniline	4.59		0.500	ug/L	5.00		91.8	52-123		
Benzo[a]pyrene	4.88		0.500	ug/L	5.00		97.6	64-120		
Acenaphthene	5.14		0.500	ug/L	5.00		103	70-120		
Acenaphthylene	4.90		0.500	ug/L	5.00		98.0	70-120		
Anthracene	5.04		0.500	ug/L	5.00		101	70-120		
Benzo[a]anthracene	5.13		0.500	ug/L	5.00		103	70-120		
1,3-Dinitrobenzene	4.82		0.500	ug/L	5.00		96.4	70-120		
Benzo[b]fluoranthene	5.39		0.500	ug/L	5.00		108	70-120		
Fluorene	5.15		0.500	ug/L	5.00		103	70-120		

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH1033 - SVOC Water (Continued)										
LCS (BDH1033-BS1)					Prepared: 8/9/2023 Analyzed: 8/24/2023					
4-Chlorophenyl-phenylether	5.08		0.500	ug/L	5.00		102	70-120		
1-Methylnaphthalene	4.98		0.500	ug/L	5.00		99.6	66-120		
Benzo(g,h,i)perylene	4.62		0.500	ug/L	5.00		92.4	66-126		
1,4-Dinitrobenzene	5.02		0.500	ug/L	5.00		100	70-120		
2,3,4,6-Tetrachlorophenol	4.96		0.500	ug/L	5.00		99.2	68-120		
2,3,5,6-Tetrachlorophenol	4.95		0.500	ug/L	5.00		99.0	55-120		
2,4,5-Trichlorophenol	4.74		0.500	ug/L	5.00		94.8	70-120		
2,4,6-Trichlorophenol	4.73		0.500	ug/L	5.00		94.6	70-120		
2,4-Dichlorophenol	4.78		0.500	ug/L	5.00		95.6	70-120		
2,4-Dinitrotoluene	4.74		0.500	ug/L	5.00		94.8	70-120		
2,6-Dinitrotoluene	5.24		0.500	ug/L	5.00		105	70-120		
2-Chloronaphthalene	4.94		0.500	ug/L	5.00		98.8	70-120		
2-Chlorophenol	4.77		0.500	ug/L	5.00		95.4	63-120		
2-Methylnaphthalene	5.15		0.500	ug/L	5.00		103	67-120		
1,4-Dichlorobenzene (para-Dichlorobenzene)	4.92		0.500	ug/L	5.00		98.4	65-120		
2,4-Dinitrophenol	5.01		0.500	ug/L	5.00		100	50-130		
Surrogate: Phenol-2,3,4,5,6-d5			*63.5*	*ug/L*	*50.0*		*127*	*40-120*		
Surrogate: Nitrobenzene-d5			*32.2*	*ug/L*	*25.0*		*129*	*51-110*		
Surrogate: Terphenyl-d14			*33.6*	*ug/L*	*25.0*		*134*	*50-130*		
Surrogate: 2-Fluorophenol			*65.3*	*ug/L*	*50.0*		*131*	*30-115*		
Surrogate: 2-Fluorobiphenyl			*31.6*	*ug/L*	*25.0*		*126*	*49-115*		
Surrogate: 2,4,6-Tribromophenol			*68.6*	*ug/L*	*50.0*		*137*	*47-122*		
LCS Dup (BDH1033-BSD1)					Prepared: 8/9/2023 Analyzed: 8/24/2023					
Di-n-butyl phthalate	5.02		0.500	ug/L	5.00		100	70-125	5.43	25
Chrysene	5.40		0.500	ug/L	5.00		108	70-120	1.12	25
Dibenz(a,h)anthracene	4.88		0.500	ug/L	5.00		97.6	64-120	14.0	25
Dibenzofuran	4.85		0.500	ug/L	5.00		97.0	70-120	4.44	25
Carbazole	5.64		0.500	ug/L	5.00		113	70-120	0.355	25
Dimethyl phthalate	4.91		0.500	ug/L	5.00		98.2	70-120	5.74	25
bis(2-chloro-1-methylethyl)ether	4.46		0.500	ug/L	5.00		89.2	67-120	11.0	25
Diethyl phthalate	4.94		0.500	ug/L	5.00		98.8	70-120	5.32	25
Benzyl Butyl Phthalate	5.44		0.500	ug/L	5.00		109	63-133	2.99	25
Di (2-ethylhexyl) phthalate	5.54		0.500	ug/L	5.00		111	61-141	2.19	25
bis(2-Chloroethoxy)methane	4.65		0.500	ug/L	5.00		93.0	70-120	9.23	25
Benzo[k]fluoranthene	5.29		0.500	ug/L	5.00		106	70-122	5.87	25
Benzo[b]fluoranthene	5.05		0.500	ug/L	5.00		101	70-120	6.51	25
Di-n-octyl phthalate	4.93		0.500	ug/L	5.00		98.6	44-126	11.3	25
Benzo[a]anthracene	5.04		0.500	ug/L	5.00		101	70-120	1.77	25
n-Nitroso-di-n-propylamine	4.65		0.500	ug/L	5.00		93.0	68-120	10.6	25
bis(2-Chloroethyl)ether	4.83		0.500	ug/L	5.00		96.6	70-120	10.8	25
Benzo[a]pyrene	4.58		0.500	ug/L	5.00		91.6	64-120	6.34	25
Phenanthrene	4.98		0.500	ug/L	5.00		99.6	70-120	1.20	25
Phenol	4.73		0.500	ug/L	5.00		94.6	54-120	6.74	25
Pyrene	5.50		0.500	ug/L	5.00		110	62-125	3.52	25
Pentachlorophenol	4.89		0.500	ug/L	5.00		97.8	61-120	8.24	25
Nitrobenzene	4.31		0.500	ug/L	5.00		86.2	70-120	8.23	25
Anthracene	4.95		0.500	ug/L	5.00		99.0	70-120	1.80	25
Fluoranthene	4.67		0.500	ug/L	5.00		93.4	70-120	7.22	25
Naphthalene	4.40		0.500	ug/L	5.00		88.0	70-120	9.94	25
Isophorone	4.82		0.500	ug/L	5.00		96.4	70-120	7.58	25

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH1033 - SVOC Water (Continued)										
LCS Dup (BDH1033-BSD1)					Prepared: 8/9/2023 Analyzed: 8/24/2023					
Indeno(1,2,3-cd)pyrene	4.80		0.500	ug/L	5.00		96.0	67-120	13.1	25
Hexachloroethane	4.32		0.500	ug/L	5.00		86.4	64-120	13.6	25
Hexachlorobutadiene	4.33		0.500	ug/L	5.00		86.6	65-120	12.8	25
Hexachlorobenzene	5.00		0.500	ug/L	5.00		100	69-120	1.59	25
Fluorene	4.81		0.500	ug/L	5.00		96.2	70-120	6.83	25
n-Nitrosodiphenylamine	4.82		0.500	ug/L	5.00		96.4	69-120	5.65	25
1-Methylnaphthalene	4.49		0.500	ug/L	5.00		89.8	66-120	10.3	25
2,6-Dinitrotoluene	4.94		0.500	ug/L	5.00		98.8	70-120	5.89	25
2,4-Dinitrotoluene	4.50		0.500	ug/L	5.00		90.0	70-120	5.19	25
2,4-Dinitrophenol	4.59		0.500	ug/L	5.00		91.8	50-130	8.75	25
2,4-Dichlorophenol	4.20		0.500	ug/L	5.00		84.0	70-120	12.9	25
2,4,6-Trichlorophenol	4.37		0.500	ug/L	5.00		87.4	70-120	7.91	25
2,4,5-Trichlorophenol	4.37		0.500	ug/L	5.00		87.4	70-120	8.12	25
2-Chloronaphthalene	4.66		0.500	ug/L	5.00		93.2	70-120	5.83	25
2,3,4,6-Tetrachlorophenol	4.54		0.500	ug/L	5.00		90.8	68-120	8.84	25
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	4.39		0.500	ug/L	5.00		87.8	65-120	11.0	25
1,4-Dinitrobenzene	4.57		0.500	ug/L	5.00		91.4	70-120	9.38	25
1,4-Dichlorobenzene (para-Dichlorobenzene)	4.38		0.500	ug/L	5.00		87.6	65-120	11.6	25
1,3-Dinitrobenzene	4.43		0.500	ug/L	5.00		88.6	70-120	8.43	25
m-Dichlorobenzene	4.45		0.500	ug/L	5.00		89.0	64-120	9.42	25
1,2-Dinitrobenzene	4.89		0.500	ug/L	5.00		97.8	70-120	5.95	25
1,2,4-Trichlorobenzene	4.31		0.500	ug/L	5.00		86.2	67-120	12.2	25
Acenaphthylene	4.62		0.500	ug/L	5.00		92.4	70-120	5.88	25
Benzo(g,h,i)perylene	5.18		0.500	ug/L	5.00		104	66-126	11.4	25
2,3,5,6-Tetrachlorophenol	4.63		0.500	ug/L	5.00		92.6	55-120	6.68	25
4-Chloro-3-methylphenol	4.43		0.500	ug/L	5.00		88.6	70-120	10.1	25
2-Chlorophenol	4.41		0.500	ug/L	5.00		88.2	63-120	7.84	25
Acenaphthene	4.91		0.500	ug/L	5.00		98.2	70-120	4.58	25
4-Nitroaniline	4.45		0.500	ug/L	5.00		89.0	52-123	3.10	25
4-Chloroaniline	3.56		0.500	ug/L	5.00		71.2	30-130	6.38	25
4-Nitrophenol	4.79		0.500	ug/L	5.00		95.8	47-125	6.46	25
4-Bromophenyl-phenylether	5.06		0.500	ug/L	5.00		101	69-120	2.34	25
4,6-Dinitro-2-methylphenol	5.02		0.500	ug/L	5.00		100	40-140	10.4	25
2-Nitrophenol	4.33		0.500	ug/L	5.00		86.6	68-120	6.70	25
2-Nitroaniline	4.96		0.500	ug/L	5.00		99.2	70-120	4.92	25
2-Methylphenol	4.14		0.500	ug/L	5.00		82.8	61-120	7.22	25
2-Methylnaphthalene	4.63		0.500	ug/L	5.00		92.6	67-120	10.6	25
3+4-Methylphenol	4.38		0.500	ug/L	5.00		87.6	68-120	8.52	25
4-Chlorophenyl-phenylether	4.79		0.500	ug/L	5.00		95.8	70-120	5.88	25
Surrogate: Phenol-2,3,4,5,6-d5			*56.8*	*ug/L*	*50.0*		*114*	*40-120*		
Surrogate: Nitrobenzene-d5			*27.2*	*ug/L*	*25.0*		*109*	*51-110*		
Surrogate: Terphenyl-d14			*29.3*	*ug/L*	*25.0*		*117*	*50-130*		
Surrogate: 2-Fluorophenol			*60.1*	*ug/L*	*50.0*		*120*	*30-115*		
Surrogate: 2-Fluorobiphenyl			*26.7*	*ug/L*	*25.0*		*107*	*49-115*		
Surrogate: 2,4,6-Tribromophenol			*56.2*	*ug/L*	*50.0*		*112*	*47-122*		

Quality Control Data
(Continued)

Volatiles

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0481 - VOC										
Blank (BDH0481-BLK1)					Prepared & Analyzed: 8/11/2023					
Acetone	ND		2.50	ug/L						
Acrolein	ND		2.50	ug/L						
Acrylonitrile	ND		2.50	ug/L						
Benzene	ND		0.500	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Bromodichloromethane	ND		0.500	ug/L						
Bromoform	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Carbon disulfide	ND		2.50	ug/L						
Carbon Tetrachloride	ND		0.500	ug/L						
Chlorobenzene (Monochlorobenzene)	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
2-Chloroethyl vinyl ether	ND		2.50	ug/L						
Chloroform	ND		0.500	ug/L						
Chloromethane	ND		0.500	ug/L						
cis-1,2-Dichloroethylene	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.500	ug/L						
DBCP (screening)	ND		0.500	ug/L						
EDB (screening)	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
trans-1-4-Dichloro-2-butene	ND		2.50	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,1-Dichloroethylene	ND		0.500	ug/L						
trans-1,2 Dichloroethylene	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.500	ug/L						
Ethylbenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Iodomethane	ND		0.500	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
Methylene Chloride (Dichloromethane)	ND		2.50	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Naphthalene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
Tetrachloroethylene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,1,2-Trichlorethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
Vinyl acetate	ND		2.50	ug/L						
Vinyl Chloride	ND		0.500	ug/L						
m/p Xylenes (MCL for total)	ND		0.500	ug/L						
o-Xylene (MCL for total)	ND		0.500	ug/L						
Total Xylenes	ND		0.500	ug/L						

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0481 - VOC (Continued)										
Blank (BDH0481-BLK1)					Prepared & Analyzed: 8/11/2023					
1,1-Dichloropropene	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
o-Chlorotoluene	ND		0.500	ug/L						
p-Chlorotoluene	ND		0.500	ug/L						
Bromobenzene	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
methyl-t-butyl ether (MTBE)	ND		2.50	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
Trichloroflouromethane	ND		0.500	ug/L						
Surrogate: Toluene-d8			*18.9*	*ug/L*	*20.0*		*94.6*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*19.4*	*ug/L*	*20.0*		*96.9*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4			*21.4*	*ug/L*	*20.0*		*107*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*20.2*	*ug/L*	*20.0*		*101*	*70-130*		
LCS (BDH0481-BS1)					Prepared & Analyzed: 8/11/2023					
Acrolein	ND		2.50	ug/L				63-126		
Acrylonitrile	14.5	L5	2.50	ug/L	10.0		145	71-127		
Benzene	10.2		0.500	ug/L	10.0		102	80-120		
Bromochloromethane	10.7		0.500	ug/L	10.0		107	80-120		
Bromodichloromethane	10.6		0.500	ug/L	10.0		106	80-120		
Bromoform	10.4		0.500	ug/L	10.0		104	74-121		
Methyl ethyl ketone (MEK)	12.7		2.50	ug/L	10.0		127	52-144		
Carbon disulfide	10.2		2.50	ug/L	10.0		102	40-160		
Carbon Tetrachloride	10.5		0.500	ug/L	10.0		105	80-120		
Chlorobenzene (Monochlorobenzene)	10.3		0.500	ug/L	10.0		103	80-120		
Chloroethane	11.0		0.500	ug/L	10.0		110	80-120		
Chloroform	10.2		0.500	ug/L	10.0		102	80-120		
cis-1,2-Dichloroethylene	10.5		0.500	ug/L	10.0		105	80-120		
cis-1,3-Dichloropropene	9.79		0.500	ug/L	10.0		97.9	80-120		
DBCP (screening)	10.8		0.500	ug/L	10.0		108	72-123		
EDB (screening)	11.0		0.500	ug/L	10.0		110	80-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	10.1		0.500	ug/L	10.0		101	80-120		
m-Dichlorobenzene	10.3		0.500	ug/L	10.0		103	80-120		
1,4-Dichlorobenzene (para-Dichlorobenzene)	10.1		0.500	ug/L	10.0		101	80-120		
Dichlorodifluoromethane	9.23		0.500	ug/L	10.0		92.3	51-137		
1,1-Dichloroethane	10.2		0.500	ug/L	10.0		102	80-120		
1,2-Dichloroethane	10.6		0.500	ug/L	10.0		106	80-120		
1,1-Dichloroethylene	10.4		0.500	ug/L	10.0		104	73-123		
trans-1,2 Dichloroethylene	10.3		0.500	ug/L	10.0		103	80-120		
1,2-Dichloropropane	10.3		0.500	ug/L	10.0		103	80-120		
trans-1,3-Dichloropropene	10.2		0.500	ug/L	10.0		102	80-120		

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0481 - VOC (Continued)										
LCS (BDH0481-BS1)					Prepared & Analyzed: 8/11/2023					
Ethylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
Hexachlorobutadiene	11.1		0.500	ug/L	10.0		111	80-120		
2-hexanone	8.76		2.50	ug/L	10.0		87.6	68-131		
Iodomethane	9.48		0.500	ug/L	10.0		94.8	41-145		
Isopropylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
Methyl isobutyl ketone (MIBK)	8.75		2.50	ug/L	10.0		87.5	66-133		
Naphthalene	10.2		0.500	ug/L	10.0		102	72-130		
Styrene	10.7		0.500	ug/L	10.0		107	80-120		
1,1,1,2-Tetrachloroethane	10.3		0.500	ug/L	10.0		103	80-120		
1,1,2,2-Tetrachloroethane	10.7		0.500	ug/L	10.0		107	80-120		
Tetrachloroethylene	10.4		0.500	ug/L	10.0		104	80-120		
Toluene	10.4		0.500	ug/L	10.0		104	80-120		
1,2,4-Trichlorobenzene	10.4		0.500	ug/L	10.0		104	80-120		
1,1,1-Trichloroethane	10.3		0.500	ug/L	10.0		103	80-120		
1,1,2-Trichlorethane	10.8		0.500	ug/L	10.0		108	80-120		
Trichloroethene	10.3		0.500	ug/L	10.0		103	80-120		
1,2,3-Trichloropropane	10.8		0.500	ug/L	10.0		108	80-120		
Vinyl Chloride	10.9		0.500	ug/L	10.0		109	77-120		
m/p Xylenes (MCL for total)	20.8		0.500	ug/L	20.0		104	80-120		
o-Xylene (MCL for total)	10.4		0.500	ug/L	10.0		104	80-120		
Total Xylenes	ND		0.500	ug/L				80-120		
1,1-Dichloropropene	10.4		0.500	ug/L	10.0		104	80-120		
1,2,3-Trichlorobenzene	10.7		0.500	ug/L	10.0		107	79-120		
1,2,4-Trimethylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
1,3,5-Trimethylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
1,3-Dichloropropane	10.7		0.500	ug/L	10.0		107	80-120		
2,2-Dichloropropane	10.2		0.500	ug/L	10.0		102	80-120		
o-Chlorotoluene	10.2		0.500	ug/L	10.0		102	80-120		
p-Chlorotoluene	10.2		0.500	ug/L	10.0		102	80-120		
Bromobenzene	10.2		0.500	ug/L	10.0		102	80-120		
Dibromochloromethane	10.5		0.500	ug/L	10.0		105	80-120		
Dibromomethane	10.9		0.500	ug/L	10.0		109	80-120		
methyl-t-butyl ether (MTBE)	10.5		2.50	ug/L	10.0		105	74-123		
n-Butylbenzene	10.6		0.500	ug/L	10.0		106	80-120		
n-Propylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
p-isopropyltoluene	10.3		0.500	ug/L	10.0		103	80-120		
sec-Butylbenzene	10.5		0.500	ug/L	10.0		105	80-120		
tert-Butylbenzene	10.4		0.500	ug/L	10.0		104	80-120		
Trichloroflouromethane	10.6		0.500	ug/L	10.0		106	71-134		
Surrogate: Toluene-d8			*20.1*	*ug/L*	*20.0*		*101*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*19.8*	*ug/L*	*20.0*		*98.8*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4			*20.8*	*ug/L*	*20.0*		*104*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*20.0*	*ug/L*	*20.0*		*99.9*	*70-130*		

Subcontract Order

X3H0081

MDH0350

Due 08/16/23

ox 929
7-0929
4-1258

Sending Laboratory:
SVL Analytical, Inc.
One Government Gulch
PO Box 929
Kellogg, ID 83837-0929
Phone: 208-784-1258
Project Manager: Dave Tryon

Client:
Landau Associates

Project Name:
Avista - KFGS

Project State of Origin:
Washington

Anatek Labs (ID)
1282 Alturas Drive
Moscow, ID 83843
Phone: 208-883-2839

Report and Invoice to SVL Analytical, Inc.

Analysis	Due	HT Expires
SVL ID: X3H0081-01 Client ID: **Outfall-001-073123**		**Water** **Sampled: 31-Jul-23 10:16**
Sub Pesticides/PCB by EPA 608	16-Aug-23	07-Aug-23 10:16
Sub SVOC by EPA 625		
Containers Supplied:		
Amber VOA HCl (C)		
Amber VOA HCl (D)		
Amber VOA HCl (E)		
VOA amber glass 40mL (F)		
Raw Amber Glass (G)		
SVL ID: X3H0081-02 Client ID: **Outfall-001-080123**		**Water** **Sampled: 01-Aug-23 11:05**
Sub Oil & Grease EPA 1664 (Anatek)	16-Aug-23	15-Aug-23 11:05
Sub Phenols		29-Aug-23 11:05
Sub VOC by EPA 624.1 (Anatek)		15-Aug-23 11:05
Containers Supplied:		
Amber VOA HCl (F)		
Amber VOA HCl (G)		
Amber VOA HCl (H)		
VOA amber glass 40mL (I)		
Raw Amber Glass (J)		
Sulfuric Amber Glass (K)		
Sulfuric Amber Glass (L)		
HCl Amber (M)		

1330

Relinquished by: MDL Date/Time: 8/8/23 Received by: SM 8.9.23 Date/Time: 8:14

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____

Kettle Falls Generating Station

WA0045217

Work Order: **X3H0081**
Landau Associates

LANDAU ASSOCIATES

C
F

31-8660
93
178

X Spokane (509) 327-9737
Portland (503) 542-1080

Date 07/31/2023
Page 1 of 2

Turnaround Time:
Standard
Accelerated

Project Name Avista-KFGS
Project No 010807L.010
Project Location/Event NPDES Permit Renewal Sampling
Sampler's Name Weston Boardman
Project Contact Shane Kastka / Carolyn Carlstrom
Send Results To skastka@landauinc.com / ccarlstrom@landauinc.com

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	TSS SM2540-D	PCBs 608	PP total metals*	PP acid-extractable compounds	BOD SM5210-B	COD SM5220-D	TOC SM5310-B/C/D	Ammonia (as N) SM4500-NH3-B and C	O&G + Grease (HEM) 1664 A or B	Chloride 325.4
Outfall-001-073123	7/31/23	10:16	water	8	X	X	X	X						
Outfall-001-080123	8/1/23	11:25	1	12					X	X	X	X	X	X

Sub Resultech 608 →
Sub SVOC 625 →

Special Handling Requirements:
Shipment Method: FedEx
Stored on ice: (Yes) / No

Observations/Comments
*only received 7 containers

Allow water samples to settle, collect aliquot from clear portion ☐
NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
Dissolved metal samples were field filtered

Other
PP = priority pollutants
*See attached Appendix A for specific analytes and analytical method(s)

see pg 2 for additional analytes

0.2°C

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Weston Boardman	Printed Name Megan Bircher	Printed Name	Printed Name
Company Landau Associates	Company SVL	Company	Company
Date 8/1/23 Time 14:00	Date 8/2/23 Time 1100	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

Kettle Falls Generating Station

WA0045217

DocUsign Envelope ID: 0D7C5152-ED22-4E39-B1CE-349CDD21F705

LANDAU ASSOCIATES

Chain-of-Custody Record

Work Order: **X3H0081**
Landau Associates

☒ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐

Date 07/31/2023
Page 2 of 2

Turnaround Time:
Standard X
Accelerated

Project Name Avista-KFGS
Project No. 0236072.010
Project Location/Event see pg 1
Sampler's Name
Project Contact
Send Results To

Special Handling Requirements:
Shipment Method: FedEx
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Hg, phenols EPA 420.1	Total Mercury 1631E *	PP VOCs *	Observations/Comments
Outfall-001-080123	8/1/23	11:05	water	12	X	X	X	
					Sub Trends LLP	LL Hg	Sub VOC GZA	

Allow water samples to settle, collect aliquot from clear portion ☐
NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
Dissolved metal samples were field filtered

Other
* See pg 1
PP = see pg 1

0.2°C

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Weston Boardman	Printed Name Megan Bircher	Printed Name	Printed Name
Company Landau Associates	Company SVL	Company	Company
Date 8/1/23 Time 14:00	Date 8/2/23 Time 1100	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: SVL X3H0081

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS Client Courier Other: Freight

Custody Seal on Cooler/Box: Yes (No) Custody Seals Intact: Yes No (N/A)

Number of Coolers/Boxes: 2 Type of Ice: Wet Ice (Ice Packs) Dry Ice None

Packing Material: (Bubble Wrap) Bags Foam/Peanuts Paper None Other: —

Cooler Temp As Read (°C): 2.7 Cooler Temp Corrected (°C): — Thermometer Used: IR 5

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	Yes	(No)	Unknown	
Total Number of Sample Bottles Received: 13				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	(Yes)	No	N/A		
VOC Trip Blanks Present?	(Yes)	No	N/A		

Record preservatives (and lot numbers, if known) for containers below:

G1L - H_2SO_4 - Phenols x2
G1L ~~H_2SO_4~~ - Phenols
G1L HCL FOG
G1L - PCB / 608
G44 - HCl - VOC x~~8~~ 6 SM 8-9-23
G44 x2
~~G44 - HCl FOG~~

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: SM Date/Time: 8/9/23 8:14

Form F19.01 - Eff 1 Dec 2022

Page 1 of 1

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Client:	Landau Associates, Inc. - Spokane	Work Order:	WDH0311
Address:	10 N Post, Suite 218	Project:	X3H0081
	Spokane, WA 99201	Reported:	8/13/2023 17:11
Attn:	Dave Tryon		

Analytical Results Report

Sample Location:	X3H0081-02 (Outfall-001-080123)		
Lab/Sample Number:	WDH0311-01	Collect Date:	08/01/23 11:05
Date Received:	08/01/23 16:00	Collected By:	
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
BOD	27.5	mg/L	2.00	8/7/23 10:27	WSK	SM 5210 B	

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Authorized Signature,

Kathleen Sattler, Laboratory Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BDH0068 - W BOD										
Blank (BDH0068-BLK1)					Prepared: 8/2/2023 Analyzed: 8/7/2023					
BOD	ND		2.00	mg/L						
LCS (BDH0068-BS1)					Prepared: 8/2/2023 Analyzed: 8/8/2023					
BOD	199			mg/L	198		101	84.4-116		

WDH0311

Due: 08/16/23

Subcontract Order

X3H0081

Sending Laboratory:
SVL Analytical, Inc.
One Government Gulch
PO Box 929
Kellogg, ID 83837-0929
Phone: 208-784-1258
Project Manager: Dave Tryon

Client:
Landau Associates

Project Name:
Avista - KFGS

Project State of Origin:
Washington

Receiving Laboratory:
Anatek Labs (WA)
504 E Sprague Street, Suite D
Spokane, WA 99202
Phone: 509-838-3999

Report and Invoice to SVL Analytical, Inc.

Analysis	Due	HT Expires		
SVL ID: X3H0081-02 Client ID: **Outfall-001-080123**			**Water**	**Sampled: 01-Aug-23 11:05**
Sub BOD SM 5210B	16-Aug-23	03-Aug-23 11:05		
Containers Supplied: Raw HDPE (D)				

Received via email

shipped directly to Anatek

Relinquished by: [signature] Date/Time: 8/3/23 Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____

LANDAU ASSOCIATES

Chain-of-Custody Record

- [ ] North Seattle (206) 631-8660
- [ ] Tacoma (253) 926-2493
- [ ] Olympia (360) 791-3178
- [x] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ]

Date 07/31/2023
Page 1 of 2

Project Name Avista-KFGS
Project No. 036072.010
Project Location/Event NPDES Permit Renewal Sampling
Sampler's Name Weston Beardman
Project Contact Shane Kostka / Carolyn Carlstrom
Send Results To skostka@landauinc.com / ccarlstrom@landauinc.com

Special Handling Requirements:
Shipment Method: FedEx
Stored on ice: Yes / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	SM2540-D	608	608	SM5210-B	SM5220-D	SM5530-B/D	Ammonia (as N)	NH3-B and calculation	Oil + Grease (HEM)	1664A or B	Cyanide total	335.4
Outfall-001-073123	7/31/23	10:16	water	8	X	X	X	X								
Outfall-001-080123	8/1/23	11:05	1	12					X	X	X	X		X		X

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion ☐
___ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
___ Dissolved metal samples were field filtered

Other
PP=priority pollutants
*See attached Appendix A for specific analytes and analytical method(s)
see pg 2 for additional analytes

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Weston Beardman	Printed Name Brock Byer	Printed Name	Printed Name
Company Landau Associates	Company Anatek	Company	Company
Date 8/1/23 Time 14:00	Date 8-1-23 Time 1600	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

9.0° IR6

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3I0316**
Reported: 22-Sep-23 08:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
Outfall-001-091523	X3I0316-01	Water	15-Sep-23 09:15	WB	19-Sep-2023	

Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3I0316**
Reported: 22-Sep-23 08:42

Client Sample ID: **Outfall-001-091523**
SVL Sample ID: **X3I0316-01 (Water)**

Sample Report Page 1 of 1

Sampled: 15-Sep-23 09:15
Received: 19-Sep-23
Sampled By: WB

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 410.4	Chemical Oxygen Demand	< 5.0	mg/L	5.0	2.0		X338151	NMS	09/20/23 15:10	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kathryn Salter
Project Manager

SVL holds the following certifications:
AZ:0538, **ID**:ID00019, **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates
421 W Riverside Ave, Ste 256
Spokane, WA 99201

Work Order: **X3I0316**
Reported: 22-Sep-23 08:42

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Classical Chemistry Parameters								
EPA 410.4	Chemical Oxygen Demand	mg/L	<5.0	2.0	5.0	X338151	20-Sep-23	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Classical Chemistry Parameters									
EPA 410.4	Chemical Oxygen Demand	mg/L	100	100	100	90 - 110	X338151	20-Sep-23	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters										
EPA 410.4	Chemical Oxygen Dema	mg/L	49.0	<5.0	50.0	98.1	90 - 110	X338151 - X3I0296-01	20-Sep-23	
EPA 410.4	Chemical Oxygen Dema	mg/L	84.8	37.0	50.0	95.5	90 - 110	X338151 - X3I0296-03	20-Sep-23	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Classical Chemistry Parameters										
EPA 410.4	Chemical Oxygen Demand	mg/L	45.9	49.0	50.0	6.6	20	91.8	X338151 - X3I0296-01	

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Landau Associates			
421 W Riverside Ave, Ste 256		Work Order:	**X3I0316**
Spokane, WA 99201		Reported:	22-Sep-23 08:42

Notes and Definitions

LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

ATTACHMENT B

Previous Lab Reports

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	AVISTA CORPORATION	**Batch #:**	170830004
Address:	1411 EAST MISSION SPOKANE, WA 99202	**Project Name:**	2018 KFGS, NPDES SAMPLING
Attn:	PAM KISH		

Analytical Results Report

Sample Number	170830004-001	**Sampling Date**	8/30/2017	**Date/Time Received**	8/30/2017 9:00 AM
Client Sample ID	KFGS DISCHARGE	**Sampling Time**	5:50 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
BOD	<2	mg/L	2	8/31/2017 11:00:00 AM	KAE	SM5210B	K5
SBOD	<2	mg/L	2	8/31/2017 11:00:00 AM	KAE	SM5210C	K5
Bromide	0.05	mg/L	0.05	9/6/2017	SUB	EPA 300.1	
Cadmium	ND	mg/L	0.001	9/5/2017 3:14:00 PM	KNP	EPA 200.8	
COD	31.3	mg/L	5	9/1/2017 4:30:00 PM	KAE	EPA 410.4	
Color	5 @ pH7.06	Color Units	5	8/31/2017 12:35:00 PM	KAE	SM 2120B	
Fluoride	1.13	mg/L	0.1	9/1/2017	SUB	SM4500F	
Gross Alpha	14.9 ± 2.98	pCi/L	3	9/6/2017 7:06:14 PM	APM	EPA 900.0	
Gross Beta	9.70 ± 1.73	pCi/L	4	9/6/2017 7:06:14 PM	APM	EPA 900.0	
Radium 228	0.413 ± 0.317	pCi/L	1	9/5/2017	GPB	EPA 904.0	
Hexachlorobutadiene	ND	ug/L	0.5	9/1/2017	HSW	EPA 625	
MBAS	ND	mg/L 342.4MW LAS	0.05	9/1/2017	KMC	SM5540C	
Titanium	0.00469	mg/L	0.001	9/5/2017 3:14:00 PM	KNP	EPA 200.8	
Total Alpha Radium	1.74 ± 0.247	pCi/L		9/2/2017 10:51:00 AM	APM	EPA 903.0	

Authorized Signature Kathleen A. Sattler

Kathleen A. Sattler, Lab Manager

K5	Glucose/glutamic acid BOD was above method acceptance criteria
MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA ID00013; AZ 0701; FL(NELAP):E87893; ID:ID00013; MT CERT0028; NM ID00013;NV ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA WA00169; ID WA00169; WA C585; MT Cert0095; FL(NELAP): E671099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	AVISTA CORPORATION	**Batch #:**	170830004
Address:	1411 EAST MISSION SPOKANE, WA 99202	**Project Name:**	2018 KFGS, NPDES SAMPLING
Attn:	PAM KISH		

Analytical Results Report - Radiochemistry

Sample Number	170830004-001	**Sampling Date**	8/30/2017	**Date/Time Received**	8/30/2017 9:00 AM
Client Sample ID	KFGS DISCHARGE	**Sampling Time**	5:50 AM	**Prep Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Activity +/- Uncertainty Units	MDA	Analysis Date	Analyst	Method	Qualifier
Radium 226	0.566 ± 0.0980 pCi/L	0.2	9/15/2017	APM	EPA 903.0	

Authorized Signature Kathleen A. Sattler
Kathy Sattler, Lab Manager

MDA Minimum Detectable Activity
MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

EDGE ANALYTICAL

Burlington, WA	Corporate Laboratory (a)	1620 S Walnut St	Burlington, WA 98233	800 755 9295 • 360 757 1400
Bellingham, WA	Microbiology (b)	805 Orchard Dr Ste 4	Bellingham, WA 98225	360 715 1212
Portland, OR	Microbiology/Chemistry (c)	9150 SW Pioneer Ct Ste W	Wilsonville, OR 97070	503 682 7802
Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541 753 4046

September 12, 2017

Pam Kish
Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

RE: 17-17631 - KFGS NPDES Permit Sampling

Dear Pam Kish,

Your project: KFGS NPDES Permit Sampling, was received on Friday July 21, 2017.

The following comments are reported for your project:
The following analytes were analyzed by alternate methods approved for NPDES testing.

Ammonia - EPA 350.1
Fluoride - EPA 300.0
Nitrate and Nitrite Nitrogen - EPA 300.0
Total Kjeldahl Nitrogen - EPA 351.2
Sulfate - EPA 300.0
Total Cyanide - ASTM D7511-09
Available Cyanide - OIA -1677
Total Phenols - EPA 420.4
1,2-Diphenolhydrazine - EPA 625

The following analytes were analyzed by an alternate method approved for NPDES testing but did not meet the permit DL and QL because there was a measureable amount in the samples.

Boron - EPA 200.7
Molybdenum - EPA 200.7
Manganese - EPA 200.7
If you have questions phone us at 800 755-9295.

Respectfully

Patrick Miller, MS
QA Officer

ANALYTICAL

RE: 17-17631 - KFGS NPDES Permit Sampling

Enclosures: Data Report
QC Reports
Chain of Custody

EDGE ANALYTICAL

Burlington, WA	Corporate Laboratory (s)	1620 S Walnut St	Burlington WA 98233	800 755 9295 • 360 757 1400
Bellingham, WA	Microbiology (s)	805 Orchard Dr Ste 4	Bellingham, WA 98225	360 715 1212
Portland, OR	Microbiology/Chemistry (s)	9450 SW Pioneer Ct Ste W	Wilsonville, OR 97070	503 682 7802
Corvallis, OR	Microbiology (s)	540 SW Third Street	Corvallis, OR 97333	541 753 4946

September 12, 2017

Case Narrative

Reference: **17-17631**

Lab Sample ID	Sample Information
40079	Discharge H2O - KFGS

Analytical Method	Notes	Created by
625	The acid surrogates are significanly below the acceptance limits and indicates a matrix affect for low recoveries likely for the acid fraction. The sample field duplicate was also analyzed in the extraction batch and confirmed the low recoveries due to matrix. The QA samples and other samples analyzed within this batch met QC criteria. co 8/4/17	CO
625	The acid surrogates are significanly below the acceptance limits and indicates a matrix affect for low recoveries likely for the acid fraction. The sample field duplicate was also analyzed in the extraction batch and confirmed the low recoveries due to matrix. The QA samples and other samples analyzed within this batch met QC criteria. I would encourage to request the laboratory to use this sample location as the matrix spike for the next sampling required. co 8/4/17	CO

Analytical Method	Notes	Created by
SM2120 B	Sample was filtered prior to analysis.	RHF

EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
1620 S Walnut St Burlington WA 98233 - 800 755.9295 - 360 757 1400
Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 Bellingham, WA 98225 360 715 1212
Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W - Wilsonville OR 97070 503 682 7837
Corvallis, OR Microbiology/Chemistry (d)
540 SW Third Street - Corvallis, OR 97333 - 541 753 4946
Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 Bend, OR 97701 541 639 8405

Data Report

Client Name: Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

Reference Number: 17-17631
Project: KFGS NPDES Permit Sampling
Report Date: 9/12/17
Date Received: 7/21/17
Approved by: anp,bj,fm,ljh,lrs
Authorized by:

Patrick Miller, MS
QA Officer

Sample Description: Discharge Dup KFGS (Clean Hg) — Sample Date: 7/19/17 1:45 pm
Lab Number: 40076 — Sample Comment: — Collected By:

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7439-97-6	MERCURY - clean	5.28	0.40		ng/L	1.0	1631		7/31/17	ETL	ANAT1631_170731	Analyzed by Anatek

Sample Description: Discharge H2O KFGS (Clean Hg) — Sample Date: 7/19/17 1:45 pm
Lab Number: 40077 — Sample Comment: — Collected By:

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7439-97-6	MERCURY - clean	5.99	0.40		ng/L	1.0	1631		7/31/17	ETL	ANAT1631_170731	Analyzed by Anatek

Sample Description: Discharge Blank KFGS (Clean Hg) — Sample Date: 7/19/17 1:45 pm
Lab Number: 40078 — Sample Comment: — Collected By:

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7439-97-6	MERCURY - clean	0.592	0.40		ng/L	1.0	1631		7/31/17	ETL	ANAT1631_170731	Analyzed by Anatek

Sample Description: Discharge H2O KFGS — Sample Date: 7/19/17 12:00 pm
Lab Number: 40079 — Sample Comment: — Collected By:

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
1332-21-4	ASBESTOS	ND	0.098		MFL>10um	1.0	100.2	a	7/28/17	HM	LAB100_170728	Analyzed by LabCor
E-10140	OIL AND GREASE	1.3 J	2.5	0.9	mg/L	1.0	1664	a	7/27/17	RHF	1664_170727	
18540-29-9	HEXAVALENT CHROMIUM	3.79	0.030	0.0016	ug/L	1.0	218.6	a	8/4/17	LJH	218.6_170804	
16984-48-8	FLUORIDE	1.13	0.1		mg/L	1.0	300.0		9/1/17	ALI	ANTK_170901	Analyzed by Anatek (SM4500F)
14797-55-8	NITRATE-N	3.79	0.100	0.0236	mg/L	1.0	300.0	a	7/21/17	HRL	H170721A	
14797-65-0	NITRITE-N	ND	0.10	0.0203	mg/L	1.0	300.0	a	7/21/17	HRL	H170721A	
14808-79-8	SULFATE	714.0	0.2	0.0497	mg/L	1.0	300.0	a	7/21/17	HRL	H170721A	

Notes
ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL) if requested
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions
D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.
Form cRsR_2.rpt

EDGE ANALYTICAL

Reference Number: 17-17631
Report Date: 9/12/17

Data Report

24959-67-9	BROMIDE	0.05	0.005	0.00051	mg/L	1.0	300.1	a	9/6/17	BJ	ANTK_170906	Analyzed by Edge Analytical
7664-41-7	AMMONIA-N	0.05	0.010	0.0012	mg/L	1.0	350.1	a	7/31/17	LRS	350.1_170731	
E-10264	TOTAL KJELDAHL NITROGEN	0.70	0.20	0.0047	mg/L	1.0	351.2	a	8/15/17	LRS	351.2_170815	
E-10253	PHENOLICS	ND	50	5	ug/L	1.0	420.4		8/16/17	KF	AMT420_170816	Analyzed by AmTest
12587-46-1	GROSS ALPHA	14.9	3		pCi/L	1.0	900.0		9/5/17	APM	ANTK_170906R	Analyzed by Anatek
12587-47-2	GROSS BETA	9.70	4		pCi/L	1.0	900.0		9/5/17	APM	ANTK_170906R	Analyzed by Anatek
7440-14-4	RADIUM 226,228 (combined)	1.74	1		pCi/L	1.0	903.1/904.0		9/5/17	APM	ANTK_170906R	Analyzed by Anatek
15262-20-1	RADIUM 228	0.413	1		pCi/L	1.0	904.0		9/5/17	APM	ANTK_170906R	Analyzed by Anatek
57-12-5	CYANIDE, TOTAL	ND	0.010	0.002	mg/L	1.0	D7511-09	a	8/3/17	ANP	D7511_170803	
57-12-5	CYANIDE, TOTAL	ND	10	2	ug/L	1.0	D7511-09	a	8/3/17	ANP	D7511_170803	
E-10162	TOTAL SUSPENDED SOLIDS	5	4		mg/L	1.0	I-3765-85	a	7/27/17	HKL	TSS_170724	
57-12-5	CYANIDE, AVAILABLE	ND	0.1		mg/L	1.0	CIA 1677	a	7/27/17	ANP	1677_170727	
E-11712	COLOR	5	5		Color Units	1.0	SM2120 B	a	8/31/17	KAE	ANATEK_170721	pH: 7.06
E-14506	ALKALINITY	442.8	10		mg CaCO3/L	10.0	SM2320 B	a	7/23/17	SRS	ALK_170723	
NA	SALINITY	1.133	0		PSS	1.0	SM2520 B	a	8/15/17	LRS	SALINITY_170815	
E-10173	TOTAL DISSOLVED SOLIDS (TDS)	1672	10		mg/L	1.0	SM2540 C	a	7/24/17	HKL	TDS_170724	
E-11949	SETTLEABLE SOLIDS BY VOLUMN	ND	1		mL/L	1.0	SM2540F	a	7/24/17	LRS	SET_170721	
7782-50-5	FREE CHLORINE RESIDUAL	0.03	0.05		mg/L	1.0	SM4500-Cl G		8/16/17	MS	FLD_170816	Analyzed in Field
57-12-5	CYANIDE (WAD)	0.005	0.005	0.0034	mg/L	1.0	SM4500-CN I	a	7/28/17	LRS	WAD_170728	
E-14539	DISSOLVED OXYGEN	5.92			mg/L	1.0	SM4500-O G	a	7/21/17	MS	FLD_DO_170854	Performed in Field
14265-44-2	ORTHO-PHOSPHATE	0.75	0.01	0.0011	mg/L	1.0	SM4500-P F	a	7/21/17	LRS	OPHOS_170721	
18496-25-8	HYDROGEN SULFIDE	ND	0.05	0.044	mg/L	1.0	SM4500-S2 F	a	7/26/17	RHF	H2S_170726	
14265-45-3	SULFITE	ND	2	0.7	mg/L	1.0	SM4500-SO3 B	a	7/25/17	RHF	SO3_170725	
E-10106	5-Day BOD Test	ND	2.0		mg/L	1.0	SM5210 B	a	8/31/17	KAE	ANATEK_170831	Analyzed by Anatek
E-10106	5-Day Soluble BOD	ND	2.0		mg/L	1.0	SM5210 B	a	8/31/17	KAE	ANATEK_170831	Analyzed by Anatek
E-10117	CHEMICAL OXYGEN DEMAND	31.3	8	4	mg/L	1.0	SM5220 D	a	9/1/17	KAE	ANTK_COD170901	Analyzed by Anatek
E-10195	TOTAL ORGANIC CARBON	6.53	0.15	0.05	mg/L	1.0	SM5310 B	a	7/27/17	ANP	TOC_170727	
NA	SURFACTANTS	ND	0.05		mg/L	1.0	SM5540 C		9/1/17	KMC	ANTK_170901	
7429-90-5	ALUMINUM	ND	10	4	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
7440-42-8	BORON	260	50	7	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
E-11778	HARDNESS as Calcium Carbonate	950200	3300	10.	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
7439-89-6	IRON	130	50	1.2	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
7439-95-4	MAGNESIUM	73700	500	1.	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
7439-96-5	MANGANESE	2	1	0.2	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
7439-98-7	MOLYBDENUM	20	10	5.	ug/L	1.0	200.7/3010A	a	7/25/17	ANP	200.7_170725B	
7440-36-0	ANTIMONY	2.1	1	0.00691	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802	
7440-38-2	ARSENIC	8.7	0.5	0.02177	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802	
7440-39-3	BARIUM	305	1	0.01489	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions
DF = Dilution Factor

EDGE ANALYTICAL

Reference Number: 17-17631
Report Date: 9/12/17

Data Report

7440-41-7	BERYLLIUM	ND	0.3	0.00676	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-43-9	CADMIUM	ND	1	0.01127	ug/L	1.0	200.8/3010A	a	8/3/17	RNP	ANTK_170905
7440-47-3	CHROMIUM	5.1	1	0.02026	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-48-4	COBALT	0.6	1	0.00405	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-50-8	COPPER	2.6	2	0.02764	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7439-92-1	LEAD	0.1	0.5	0.00666	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-02-0	NICKEL	0.7	0.5	0.01618	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7782-49-2	SELENIUM	3.6	1	0.0266	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-22-4	SILVER	ND	0.2	0.01175	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-28-0	THALLIUM	ND	0.1	0.00706	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-28-0	THALLIUM	ND	0.001	7.06E-06	mg/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-31-5	TIN	7.1	1	0.5	ug/L	1.0	200.8/3010A	a	8/7/17	BJ	200.8_170807A2
7440-32-6	TITANIUM	13	1	0.05	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7440-66-6	ZINC	13	2.5	0.55193	ug/L	1.0	200.8/3010A	a	7/28/17	BJ	200.8_17072802
7723-14-0	TOTAL PHOSPHORUS	1.45	0.100	0.0026	mg/L	10.0	SM4500-P F/SM4500-P B(5)	a	7/25/17	IRS	TPHOS_170725

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. = Dilution Factor

Reference Number: 17-17631
Report Date: 9/12/17

Data Report

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions
D.F. - Dilution Factor

EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
1620 S Walnut St - Burlington, WA 98233 - 800 755 9295 - 360 757 1400
Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 - Bellingham WA 98225 - 360 715 1212
Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503 682 7602
Corvallis, OR Microbiology/Chemistry (d)
540 SW Third Street - Corvallis, OR 97333 - 541 753 4146
Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541 639 6426

WSDOE Lab C587

Revised - 9/12/2017

DATA REPORT

Client Name: Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

Reference Number: 17-17631
Project: KFGS NPDES Permit Sampl

Lab Number: 40079
Field ID: Discharge H2O
Sample Description: KFGS
Matrix: Water
Sample Date: 7/19/17
Extraction Date:
Extraction Method: 3510C

Report Date: 8/18/17
Date Analyzed: 8/3/17
Analyst: SMT
Analytical Method: 1613
Batch: PACE1613_170803
Approved By: lm,pdm

Authorized by:

Patrick Miller, MS
QA Officer

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F	Lab	COMMENT
	Base/Neutral Extractables									
41903-57-5	2,3,7,8-TCDD(DIOXIN)	ND		pg/l	5	5	1.24	1.00		Analyzed by PACE_MN

Notes:
Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet
ND - indicates the compound was not detected above the PQL or MDL
Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions
Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement
D.F. - Dilution Factor.

If you have any questions concerning this report contact us at the above phone number.
Form c500.rpt

EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
1620 S Walnut St · Burlington WA 98233 · 800.755.9295 · 360 757 1400

Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 · Bellingham, WA 98225 · 360 715 1212

Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W · Wilsonville OR 97070 · 503 659 7202

Corvallis, OR Microbiology/Chemistry (d)
549 SW Third Street · Corvallis, OR 97333 · 541 753 4946

Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 · Bend, OR 97701 · 541 639 6426

WSDOE Lab C567

Revised - 9/12/2017

DATA REPORT

Client Name: Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

Reference Number: 17-17631
Project: KFGS NPDES Permit Sampl

Lab Number: 40079
Field ID: Discharge H2O
Sample Description: KFGS
Matrix: Water
Sample Date: 7/19/17
Extraction Date: 7/26/17
Extraction Method: 3510C

Report Date: 8/18/17
Date Analyzed: 7/27/17
Analyst: CO
Analytical Method: 608
Batch: 608_170726
Approved By: fm,pdm

Authorized by:

Patrick Miller, MS
QA Officer

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
	PCBs									
12674-11-2	AROCLOR 1016	ND		ug/L	0.1	0.5	0.1	1.00	a	
11104-28-2	AROCLOR 1221	ND		ug/L	0.5	0.5	0.2	1.00	a	
11141-16-5	AROCLOR 1232	ND		ug/L	0.5	0.5	0.2	1.00	a	
53469-21-9	AROCLOR 1242	ND		ug/L	0.1	0.5	0.1	1.00	a	
12672-29-6	AROCLOR 1248	ND		ug/L	0.5	0.5	0.2	1.00	a	
11097-69-1	AROCLOR 1254	ND		ug/L	0.1	0.5	0.1	1.00	a	
11096-82-5	AROCLOR 1260	ND		ug/L	0.1	0.5	0.1	1.00	a	
	Organochlorine Pesticides									
309-00-2	ALDRIN	ND		ug/L	0.05	0.05	0.013	1.00	a	
319-84-6	BHC, ALPHA -	ND		ug/L	0.05	0.05	0.021	1.00	a	
319-85-7	BHC, BETA -	ND		ug/L	0.05	0.05	0.009	1.00	a	
58-89-9	LINDANE (BHC - GAMMA)	ND		ug/L	0.05	0.05	0.015	1.00	a	
319-86-8	BHC, DELTA -	ND		ug/L	0.05	0.05	0.013	1.00	a	
57-74-9	CHLORDANE	ND		ug/L	0.05	0.05	0.018	1.00	a	
50-29-3	4,4' - DDT	ND		ug/L	0.05	0.05	0.011	1.00	a	
72-55-9	4,4' - DDE	ND		ug/L	0.05	0.05	0.025	1.00	a	
72-54-8	4,4' - DDD	ND		ug/L	0.05	0.05	0.011	1.00	a	
60-57-1	DIELDRIN	ND		ug/L	0.05	0.05	0.017	1.00	a	
959-98-8	ENDOSULFAN I	ND		ug/L	0.05	0.05	0.022	1.00	a	
33213-65-9	ENDOSULFAN II	ND		ug/L	0.05	0.05	0.023	1.00	a	
1031-07-8	ENDOSULFAN SULFATE	ND		ug/L	0.05	0.05	0.017	1.00	a	
7421-93-4	ENDRIN ALDEHYDE	ND		ug/L	0.05	0.05	0.015	1.00	a	
76-44-8	HEPTACHLOR	ND		ug/L	0.05	0.05	0.024	1.00	a	
1024-57-3	HEPTACHLOR EPOXIDE "B"	ND		ug/L	0.05	0.05	0.014	1.00	a	
8001-35-2	TOXAPHENE	ND		ug/L	0.5	0.5	0.4	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.
ND - indicates the compound was not detected above the PQL or MDL
Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.
D.F. - Dilution Factor.

If you have any questions concerning this report contact us at the above phone number.
Form c608 rpt

EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
1620 S Walnut St Burlington WA 98233 • 800.755.9295 • 360 757 1400

Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 Bellingham WA 98225 360 715 1212

Portland, OR Microbiology/Chemistry (c)
9405 SW Nimbus Ave Beaverton OR 97008 • 503 687 4007

Corvallis, OR Microbiology/Chemistry (d)
540 SW Third Street Corvallis, OR 97333 541 753 4046

Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 Bend, OR 97701 541 639 8425

WSDOE Lab C567

Revised - 9/12/2017

DATA REPORT

Client Name: Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

Reference Number: 17-17631
Project: KFGS NPDES Permit Sampl

Lab Number: 40079
Field ID: Discharge H2O
Sample Description: KFGS
Matrix: Water
Sample Date: 7/19/17
Extraction Date: 7/21/17
Extraction Method: 5030B

Report Date: 8/18/17
Date Analyzed: 7/21/17
Analyst: HY
Analytical Method: 624
Batch: 624_170721
Approved By: fm,pdm

Authorized by:

Patrick Miller, MS
QA Officer

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F	Lab	COMMENT
	Volatiles									
120-82-1	1,2,4 - TRICHLOROBENZENE	ND		ug/L	0.5	0.5	0.06	1.00	a	
107-02-8	ACROLEIN	ND		ug/L	4.0	10	1.05	1.00	a	
107-13-1	ACRYLONITRILE	ND		ug/L	1.0	2.0	0.97	1.00	a	
71-43-2	BENZENE	ND		ug/L	0.5	2.0	0.13	1.00	a	
75-25-2	BROMOFORM	ND		ug/L	0.5	2.0	0.12	1.00	a	
56-23-5	CARBON TETRACHLORIDE	ND		ug/L	0.5	2.0	0.23	1.00	a	
108-90-7	CHLOROBENZENE	ND		ug/L	0.5	2.0	0.08	1.00	a	
75-00-3	CHLOROETHANE	ND		ug/L	0.5	2.0	0.29	1.00	a	
110-75-8	2 - CHLOROETHYL VINYL ETHER	ND		ug/L	0.5	2.0	0.97	1.00	a	
67-66-3	CHLOROFORM	0.7		ug/L	0.5	2.0	0.06	1.00	a	
124-48-1	CHLORODIBROMOMETHANE	ND		ug/L	0.5	2.0	0.12	1.00	a	
95-50-1	O - DICHLOROBENZENE	ND		ug/L	0.5	7.6	0.04	1.00	a	
541-73-1	M - DICHLOROBENZENE	ND		ug/L	0.5	7.6	0.06	1.00	a	
106-46-7	P - DICHLOROBENZENE	ND		ug/L	0.5	17.6	0.08	1.00	a	
75-27-4	DICHLOROBROMOMETHANE	ND		ug/L	0.5	2.0	0.07	1.00	a	
75-34-3	1,1 - DICHLOROETHANE	ND		ug/L	0.5	2.0	0.12	1.00	a	
107-06-2	1,2 - DICHLOROETHANE	ND		ug/L	0.5	2.0	0.08	1.00	a	
75-35-4	1,1 - DICHLOROETHYLENE	ND		ug/L	0.5	2.0	0.21	1.00	a	
78-87-5	1,2 - DICHLOROPROPANE	ND		ug/L	0.5	2.0	0.09	1.00	a	
10061-01-5	CIS - 1,3 DICHLOROPROPENE	ND		ug/L	0.5	2.0	0.08	1.00	a	
10061-02-6	TRANS- 1,3 - DICHLOROPROPENE	ND		ug/L	0.5	2.0	0.08	1.00	a	
542-75-6	1,3-DICHLOROPROPYLENE, TOTAL	ND		ug/L	0.5	0.5		1.00	a	
100-41-4	ETHYLBENZENE	ND		ug/L	0.5	2.0	0.11	1.00	a	
75-09-2	METHYLENE CHLORIDE	ND		ug/L	0.5	10.0	0.06	1.00	a	
79-34-5	1,1,2,2 - TETRACHLOROETHANE	ND		ug/L	0.5	2.0	0.13	1.00	a	
127-18-4	TETRACHLOROETHYLENE	ND		ug/L	0.5	2.0	0.21	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet
ND - indicates the compound was not detected above the PQL or MDL
Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions
Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.
D.F. - Dilution Factor.

If you have any questions concerning this report contact us at the above phone number

EDGE ANALYTICAL

Reference Number: 17-17631
Lab Number: 40079
Report Date: 8/18/17

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
108-88-3	TOLUENE	ND		ug/L	0.5	2.0	0.12	1.00	a	
156-60-5	1,2 - TRANS - DICHLOROETHYLENE	ND		ug/L	0.5	2.0	0.17	1.00	a	
71-55-6	1,1,1 - TRICHLOROETHANE	ND		ug/L	0.5	2.0	0.31	1.00	a	
79-00-5	1,1,2 - TRICHLOROETHANE	ND		ug/L	0.5	2.0	0.15	1.00	a	
79-01-6	TRICHLOROETHYLENE	ND		ug/L	0.5	2.0	0.15	1.00	a	
75-01-4	VINYL CHLORIDE	ND		ug/L	0.5	2.0	0.18	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.
ND - indicates the compound was not detected above the PQL or MDL
Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement
D.F. - Dilution Factor.

EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
1620 S Walnut St · Burlington, WA 98233 · 360 755 9295 · 360 757 1409
Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 · Bellingham WA 98225 · 360 715 1212
Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W · Wilsonville, OR 97070 · 503 682 7807
Corvallis, OR Microbiology/Chemistry (d)
540 SW Third Street · Corvallis, OR 97333 · 541 753 4949
Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 · Bend, OR 97701 · 541 639 0425

WSDOE Lab C567

Revised - 9/12/2017

DATA REPORT

Client Name: Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

Reference Number: 17-17631
Project: KFGS NPDES Permit Sampl

Lab Number: 40079
Field ID: Discharge H2O
Sample Description: KFGS
Matrix: Water
Sample Date: 7/19/17
Extraction Date: 7/25/17
Extraction Method: 3510C

Report Date: 8/18/17
Date Analyzed: 7/26/17
Analyst: CO
Analytical Method: 625
Batch: 625_170725
Approved By: fm.pdm

Authorized by:

Patrick Miller, MS
QA Officer

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
	Base/Neutral Extractables									
83-32-9	ACENAPHTHENE	ND		ug/L	0.4	0.4	0.04	1.00	a	
208-96-8	ACENAPHTHYLENE	ND		ug/L	0.4	0.6	0.07	1.00	a	
120-12-7	ANTHRACENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
92-87-5	BENZIDINE	ND		ug/L	10	24	9.	1.00	a	
85-68-7	BENZYL BUTYL PHTHALATE	ND		ug/L	0.4	0.6	0.03	1.00	a	
56-55-3	BENZ[A]ANTHRACENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
205-99-2	3,4 - BENZOFLUORANTHENE (BENZO[E	ND		ug/L	0.4	1.6	0.08	1.00	a	unresolved w/ Benzo(J)Fluoranthene
207-08-9	BENZO[K]FLUORANTHENE	ND		ug/L	0.4	1.6	0.08	1.00	a	
50-32-8	BENZO[A]PYRENE	ND		ug/L	0.4	1	0.05	1.00	a	
191-24-2	BENZO[G,H,I]PERYLENE	ND		ug/L	0.4	1	0.05	1.00	a	
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND		ug/L	0.4	21.2	0.06	1.00	a	
111-44-4	BIS(2-CHLOROETHYL)ETHER	ND		ug/L	0.4	1	0.06	1.00	a	
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	ND		ug/L	0.4	0.6	0.06	1.00	a	
117-81-7	Bis(2-ETHYLHEXYL)PHTHALATE	ND		ug/L	0.4	0.5	0.1	1.00	a	
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND		ug/L	0.4	0.4	0.04	1.00	a	
91-58-7	2-CHLORONAPHTHALENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND		ug/L	0.4	0.5	0.04	1.00	a	
218-01-9	CHRYSENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
53-70-3	DIBENZO[A,H]ANTHRACENE	ND		ug/L	0.4	1.6	0.05	1.00	a	
91-94-1	3,3 DICHLOROBENZIDINE	ND		ug/L	0.4	1	0.2	1.00	a	
84-66-2	DIETHYL PHTHALATE	ND		ug/L	0.4	7.6	0.06	1.00	a	
131-11-3	DIMETHYL PHTHALATE	ND		ug/L	0.4	6.4	0.05	1.00	a	
84-74-2	DI-N-BUTYL PHTHALATE	ND		ug/L	0.4	1	0.07	1.00	a	
121-14-2	2,4-DINITROTOLUENE	ND		ug/L	0.4	0.4	0.07	1.00	a	
606-20-2	2,6-DINITROTOLUENE	ND		ug/L	0.4	0.4	0.09	1.00	a	

Notes:
Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.
ND - indicates the compound was not detected above the PQL or MDL
Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement
D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.
Form c008.rpt

EDGE ANALYTICAL

Reference Number: 17-17631
Lab Number: 40079
Report Date: 8/18/17

CAS	Compound	RESULT	Flag	UNITS	Lab QL	Permit QL	MDL	D.F.	Lab	COMMENT
117-84-0	DI-N-OCTYL PHTHALATE	ND		ug/L	0.4	0.6	0.02	1.00	a	
122-66-7	1,2-DIPHENYLHYDRAZINE (as Azobenze	ND		ug/L	0.4	20	0.06	1.00	a	as Azobenzene
206-44-0	FLUORANTHENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
86-73-7	FLUORENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
118-74-1	HEXACHLOROBENZENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
87-68-3	HEXACHLOROBUTADIENE	ND		ug/L	0.4	1	0.09	1.00	a	
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND		ug/L	0.4	1	0.2	1.00	a	
67-72-1	HEXACHLOROETHANE	ND		ug/L	0.4	1	0.09	1.00	a	
193-39-5	INDENO(1,2,3,C,D)PYRENE	ND		ug/L	0.4	1	0.09	1.00	a	
78-59-1	ISOPHORONE	ND		ug/l	0.4	1	0.07	1.00	a	
91-20-3	NAPHTHALENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
98-95-3	NITROBENZENE	ND		ug/L	0.4	1	0.05	1.00	a	
62-75-9	N-NITROSODIMETHYLAMINE	ND		ug/l	0.4	4	0.3	1.00	a	
621-64-7	N-NITROSODI-N-PROPYLAMINE	ND		ug/L	0.4	1	0.1	1.00	a	
86-30-6	N-NITROSODIPHENYLAMINE	ND		ug/l	0.4	1	0.05	1.00	a	as Diphenylamine
85-01-8	PHENANTHRENE	ND		ug/L	0.4	0.6	0.06	1.00	a	
129-00-0	PYRENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
120-82-1	1,2,4-TRICHLOROBENZENE	ND		ug/L	0.4	0.6	0.05	1.00	a	
	Acid Extractables									
95-57-8	2-CHOROPHENOL	ND		ug/L	1	2	0.1	1.00	a	
120-83-2	2,4-DICHLOROPHENOL	ND		ug/L	1	1	0.2	1.00	a	
105-67-9	2,4-DIMETHYLPHENOL	ND		ug/l	1	1	0.4	1.00	a	
534-52-1	4,6-DINITRO-O-CRESOL	ND		ug/L	1	2	0.3	1.00	a	
88-75-5	2-NITROPHENOL	ND		ug/L	1	1	0.2	1.00	a	
100-02-7	4-NITROPHENOL	ND		ug/L	1	1	0.3	1.00	a	
59-50-7	P-CHLORO-M-CRESOL	ND		ug/L	1	2	0.2	1.00	a	
87-86-5	PENTACHLOROPHENOL	ND		ug/L	1	1	0.2	1.00	a	
108-95-2	PHENOL	ND		ug/L	1	4	0.1	1.00	a	
88-06-2	2,4,6-TRICHLOROPHENOL	ND		ug/L	1	4	0.1	1.00	a	
	Ecology Priority Toxic Chemicals									
205-82-3	BENZO(J)FLUORANTHENE	ND		ug/L	1	1	0.4	1.00	a	unresolved w/ Benzo(B)Fluoranthene
189-55-9	BENZO(R,S,T)PENTAPHENE	ND		ug/L	1	1	0.3	1.00	a	
226-36-8	DIBENZO(A,H)ACRIDINE	ND		ug/l	1	10	0.4	1.00	a	
192-65-4	DIBENZO(A,E)PYRENE	ND		ug/L	1	10	0.5	1.00	a	
189-64-0	DIBENZO(A,H)PYRENE	ND		ug/L	1	10	0.3	1.00	a	
56-49-5	3-METHYL CHOLANTHRENE	ND		ug/l	1	8	0.4	1.00	a	
198-55-0	PERYLENE	ND		ug/L	1	7.6	0.6	1.00	a	

Notes

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.
ND - indicates the compound was not detected above the POL or MDL.
Lab QL - Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
Permit QL - Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.
D.F. - Dilution Factor

EDGE ANALYTICAL

Burlington, WA Corporate Laboratory (a)
1020 S Walnut St · Burlington, WA 98233 · 800.755.0205 · 360 757 1400
Bellingham, WA Microbiology (b)
805 Orchard Dr Ste 4 · Bellingham, WA 98225 · 360 715 1212
Portland, OR Microbiology/Chemistry (c)
9150 SW Pioneer Ct Ste W · Wilsonville, OR 97070 · 503 692 7052
Corvallis, OR Microbiology/Chemistry (d)
540 SW Third Street · Corvallis, OR 97333 · 541 753 4946
Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 · Bend, OR 97701 · 541 639 8425

Revised - 9/12/2017

Hydrocarbon Data Report

Client Name: Avista Corporation
1411 E Mission Ave
Spokane, WA 99202

Reference Number: 17-17631
Project: KFGS NPDES Permit Sampl
Report Date: 8/18/17
Date Received: 7/21/17
Approved By: hy,pdm
Authorized by:

Patrick Miller, MS
QA Officer

Sample Description: Discharge H2O - KFGS
Lab Number: 40079
Date Analyzed: 7/24/17

Sample Date: 7/19/17 12:00
Collected By:
Analyzed By: WCY

Parameter	Result	Flag	DF	Cleanup Level	PQL	MDL	Units	Method	Lab	Batch	Comment
NWTPH-Dx											
DIESEL (C12 - C24)	ND		1	0.5	0.1	0.07	mg/L	NWTPH-Dx/35 10C	a	DXW_170724	
HEAVIER OILS (>C24)	ND		1	0.5	0.1		mg/L	NWTPH Dx/35 10C	a	DXW_170724	

Notation:
ND - A result of "ND" indicates that the compound was not detected above the Lab's Method Reporting Limit - MRL
POL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions
D F - Dilution Factor
Cleanup Level - The regulatory limit for Method A Cleanup Levels (MTCA, Chapter 173-340 WAC) contaminants in the specified matrix. Amended Feb 12, 2001
The Cleanup level for Gasoline Range Organics (GRO) is 100 mg/Kg for gas mixtures without benzene and when the total ethylbenzene, toluene and xylenes are less than 1% of the gasoline concentration. The Cleanup level for GRO is 30 mg/Kg for all other mixtures.

If you have any questions concerning this report contact us at the above phone number.
Form: cHCID rpt

ATTACHMENT C

Sample Collection Forms

LANDAU ASSOCIATES

Groundwater Low-Flow Sample Collection Form

Project Name: Avista - KFGS NPDES Permit Renewal
Project Number: 0236072.010
Event: NPDES Permit Renewal Sampling
Date/Time: 07/31/2023; 10:16
Sample Number: Outfall-001-073123
Weather: NA (indoors)
Landau Representative: WMB

WATER LEVEL/WELL/PURGE DATA

Well Condition: Secure (YES or NO) Damaged (YES or NO) Describe: Discharge Sample Port
DTW Before Purging (ft) NA Time: Flow through cell vol. Avg. Flow Rate 290 mL/hr
Begin Purge: Date/Time: 07/31/2023; 10:16 End Purge: Date/Time: 08/01/2023; 10:08 Liters Purged:
Purge water disposed to: ☐ 55-gal Drum ☐ Storage Tank ☐ Ground ☐ Other

Time	Temp (°C)	Cond. (uS/cm)	D.O. (mg/L)	pH	ORP (mV)	Turbidity (NTU)	DTW (ft)	Cumulative Purge Vol (L)	Comments/ Observations
Purge Goals: Stabilization of Parameters for three consecutive readings within the following limits									
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft		
7/31 10:00	17.35	1476	7.73	7.13	137.3	1.41	NA	0	Pre sample collection
Site equip	18.5			7.96			384 gpm		
8/1 10:45	17.49	1514	8.50	7.24	78.8	1.42	NA	approx 5	Post sample collection
Site equip	18.1			7.99			332 gpm		Chlorine 0.02 mg/L

Autosampler setup: Set to collect 290 ml of sample volume every 60 minutes for 24 hourly samples beginning at 10:16 on 7/31 and finishing at 09:16 on 8/1. At 17:20 on 7/31, carboy was checked and it appeared that 3 to 4 samples had been missed based on volume of water. During the troubleshooting process 3 "grab" samples were collected through the autosampler into the carboy. The autosampler was reset to collect 290 ml of sample volume every 60 minutes 17 times beginning at 18:08 and finishing at 10:08. Estimated total of 24 samples total collected over 24 hr period.

SAMPLE COLLECTION DATA

Sample Collected With: ☐ Bailer ☒ Pump/Pump Type Autosampler ISCO GLS Sampler
Made of: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☒ Dedicated
Decon Procedure: ☐ Liquinox Wash ☐ Tap Rinse ☐ DI Water ☒ Dedicated
☐ Other
Sample Description (color, turbidity, odor, sheen, etc.): Colorless, clear, no odor, no sheen. 24 hour composite sample.

QUANTITY	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	(8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA ☐ OR ☐
	(8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA ☐ OR ☐
1 (500 ml poly)	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)
	(COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)
	(Total Cyanide) (WAD Cyanide) (Free Cyanide)
1 (PP list)	(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
500 ml poly HNO3	(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica
	VOC (Boeing short list)
	Methane Ethane Ethene Acetylene
1 1L amber	PCBs
5	Acid extractable compounds (PP list) (3 HCL VOAs & 2 2 Unpreserved VOAs)
	others

Duplicate Sample No(s):
Comments:
Signature: Date: 08/01/2023

LANDAU ASSOCIATES

Groundwater Low-Flow Sample Collection Form

Project Name: Avista - KFGS NPDES Permit Renewal
Project Number: 0236072.010
Event: Permit Renewal Sampling
Date/Time: 08/01/2023; 11:05
Sample Number: Outfall-001-080123
Weather: NA (indoors)
Landau Representative: WMB

WATER LEVEL/WELL/PURGE DATA

Well Condition: Secure (YES or NO) Damaged (YES or NO) Describe: Discharge Sample Port
DTW Before Purging (ft) NA Time: Flow through cell vol. 500mL Avg. Flow Rate NA
Begin Purge: Date/Time: End Purge: Date/Time: Liters Purged:
Purge water disposed to: ☐ 55-gal Drum ☐ Storage Tank ☐ Ground ☐ Other

Time	Temp (°C)	Cond. (uS/cm)	D.O. (mg/L)	pH	ORP (mV)	Turbidity (NTU)	DTW (ft)	Cumulative Purge Vol (L)	Comments/ Observations
Purge Goals: Stabilization of Parameters for three consecutive readings within the following limits									
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft		
10:45	17.49	1514	8.50	7.24	78.8	1.42	NA		Grab sample
Site equip	18.1			7.99			332 gpm		chlorine 0.02 mg/L

SAMPLE COLLECTION DATA

Sample Collected With: ☐ Bailer ☐ Pump/Pump Type Sample collected directly from discharge piping through sample tubing (pressurized)
Made of: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Liquinox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☐ Other
Sample Description (color, turbidity, odor, sheen, etc.): Colorless, clear, no odor, no sheen.

QUANTITY	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)		
	(8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX)	WA ☐	OR ☐
1 1L amber HCL	(8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease)	WA ■	OR ☐
1 (500 ml poly)	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)		
3 (500 ml poly H2SO4,	(COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)		
2 HCL VOAs)	(Total Cyanide) (WAD Cyanide) (Free Cyanide) 250 brown poly ml NAOH		
	(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)		
	(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica		
	VOC (Boeing short list)		
	Methane Ethane Ethene Acetylene		
2	total phenols (1 1L amber unpreserved and 1 1L amber H2SO4)		
1	Mercury (500 ml poly HNO3)		
2	others PP VOCs (2 HCL VOAs)		

~~Duplicate Sample N~~ 1 Ammonia (as N) (1 1L amber H2SO4)
Comments:
Signature: Date: 08/01/2023

LANDAU ASSOCIATES

Groundwater Low-Flow Sample Collection Form

Project Name: Avista - KFGS NPDES Permit Renewal
Project Number: 0236072.010
Event: Permit Renewal Sampling
Date/Time: 09/15/2023; 09:15
Sample Number: Outfall-001-080123
Weather: NA (indoors)
Landau Representative: WMB

WATER LEVEL/WELL/PURGE DATA

Well Condition: Secure (YES or NO) Damaged (YES or NO) Describe: Discharge Sample Port
DTW Before Purging (ft) NA Time: _____ Flow through cell vol. 500mL Avg. Flow Rate NA
Begin Purge: Date/Time: _____ End Purge: Date/Time: _____ Liters Purged: _____
Purge water disposed to: ☐ 55-gal Drum ☐ Storage Tank ☐ Ground ☐ Other _____

Time	Temp (°C)	Cond. (uS/cm)	D.O. (mg/L)	pH	ORP (mV)	Turbidity (NTU)	DTW (ft)	Cumulative Purge Vol (L)	Comments/ Observations
Purge Goals: Stabilization of Parameters for three consecutive readings within the following limits									
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft		
09:15	15.83	1486	7.96	6.74	94.8	3.40	NA	NA	Landau Readings
09:15	17.0			8.08				355.2 gpm	Facility Readings
								system flow	
									Resample for COD

SAMPLE COLLECTION DATA

Sample Collected With: ☐ Bailer ☐ Pump/Pump Type _____
Made of: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☐ Other ☐ Dedicated
Decon Procedure: ☐ Liquinox Wash ☐ Tap Rinse ☐ DI Water ☐ Dedicated
☒ Other Grab sample from samples port.
Sample Description (color, turbidity, odor, sheen, etc.): Colorless, clear, no odor, no sheen.

QUANTITY	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)		
	(8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX)	WA ☐	OR ☐
	(8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease)	WA ☒	OR ☐
	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)		
1	(COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) 250 brown poly ml NAOH		
	(Total Cyanide) (WAD Cyanide) (Free Cyanide)		
	(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)		
	(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica		
	VOC (Boeing short list)		
	Methane Ethane Ethene Acetylene		
	others		

Duplicate Sample No(s): _____
Comments: _____
Signature: _____ Date: 09/15/2023

ATTACHMENT D

Stormwater Pollution Prevention Plan (SWPPP)

Stormwater Pollution Prevention Plan (SWPPP)

for:

Kettle Falls Generating Station
1151 Highway 395 North
Kettle Falls, WA 99141
509-738-2449

SWPPP Contact(s):

Avista Corporation
Josh LaPorte
P.O. Box 3727
Spokane, WA 99220-3727
509-738-1510
Josh.laporte@avistacorp.com

SWPPP Preparation Date:

11/2023

Contents

Appendices

Section 1. Introduction, Facility Description and Contact Information

This stormwater pollution prevention plan has been developed to comply with the specific requirements identified in NPDES Waste Discharge Permit No. WA0045217 issued to Avista Corporation's Kettle Falls Generating Station on October 17, 2019 ,effective December 1, 2019, and expiring November 30, 2024.

1.1 Facility Information

Instructions:

- Detailed information on determining your site's latitude and longitude can be found at www.epa.gov/npdes/stormwater/latlong.
- Use this link to enter your address to determine your site's latitude and longitude: http://www.mashupsoft.com/maps/latlonlocator

Facility Information

Name of Facility: Kettle Falls Generating Station

Street: 1151 Highway 395 North

City: Kettle Falls State: WA ZIP Code: 99141

County: Stevens

Permit Number: WA0045217

Latitude/Longitude - Use **one** of three possible formats, and specify method (Optional)

Latitude:

1. 48 º 37 ' 11" N (degrees, minutes, seconds)

Longitude:

1. 118 º 06 ' 32" W (degrees, minutes, seconds)

Estimated area of industrial activity at site exposed to stormwater: 46 (acres)

Discharge Information

Does this facility discharge stormwater into surface waters? ☒ Yes ☐ No

Does this facility discharge stormwater into a municipal storm water conveyance system? ☐ Yes ☒ No

SIC Code(s): 4911

1.2. Contact Information/Responsible Parties

Instructions:

- List the facility operator(s), facility owner, and 24 hour emergency contact. Indicate respective responsibilities, where appropriate.

Facility Operator(s):

Name: Patrick Lutskas
Address: 1151 Highway 395 North
City, State, Zip Code: Kettle Falls, WA 99141
Telephone Number: 509-738-1523
Email address: Patrick.Lutskas@avistacorp.com

Facility Owner(s):

Name: Avista Corporation
Address: P.O. Box 3727
City, State, Zip Code: Spokane, WA 99220-3727
Telephone Number: 509-732-1510
Email address: Josh.Laporte@avistacorp.com

SWPPP Contact:

Name: Josh LaPorte
Telephone number: 509-738-1510
Email address: Josh.Laporte@avistacorp.com

1.3. General Location Map (Optional)

Instructions:

- Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges (Appendix A).

Include a copy of the general location map for this facility in Appendix A.

1.4. Site Map

Instructions (see S9.B.1. pg. 23 of the NPDES Waste Discharge Permit No. WA0045217):

The SWPPP must contain a site map which must identify:

a) The scale or include relative distances between significant structures and
b) drainage systems.
c) Significant features.
d) The stormwater drainage and discharge structures and identify, by name,
e) any other party other than the Permittee that owns any stormwater
f) drainage or discharge structures.
g) The stormwater drainage areas for each stormwater discharge point offsite
h) (including discharges to ground water) and assign a unique identifying
i) number for each discharge point.
j) Each sampling location by unique identifying number.
k) Paved areas and buildings.
l) Areas of pollutant contact (actual or potential) associated with specific
m) industrial activities.
n) If required, surface water locations (including wetlands and drainage
o) ditches).
p) Areas of existing and potential soil erosion (in a significant amount).
q) Vehicle maintenance areas.
r) Lands and waters adjacent to the site that may be helpful in identifying discharge points or drainage routes.

Include a copy of the site map for this facility in Appendix B.

1.5. Stormwater Pollution Prevention Team

Instructions (S9.B.3. pg.25 of the NPDES Waste Discharge Permit No. WA0045217):

- The SWPPP must identify specific individuals by name or by title within the
- organization (pollution prevention team) whose responsibilities include:

SWPPP development, implementation, maintenance, and modification.

Staff Names and/or Title	Individual Responsibilities
Corporate Environmental Scientist	• Ensure that stormwater pollution prevention at the Kettle Falls Generating Station receives appropriate management attention. • Ascertain that the operations of the Generating Station comply with the requirements of the applicable regulations governing stormwater pollution prevention. • Be responsible for determining if a spill or release requires notification of federal, state or local agencies. • Make all required federal, state and local notifications for spills of oil, petroleum products or hazardous substances. • Ascertain that Avista Corporation employees receive appropriate training.
KFGS Environmental Scientist	• Participate in the development of safety inspections and inspection logs with the Corporate Environmental Scientist. • Initiate SWPPP amendments whenever there is a change in design, construction, operation, or maintenance at the facility that significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged (S9.A.4.b.). • Initiate SWPPP amendments if the owner or operator or the applicable local or state regulatory authority determines during inspections or investigations that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP will be modified as necessary to include additional or modified BMPs designed to correct problems identified and to correct the deficiencies identified in writing from Ecology within 30 days of notice (S9.A.4.a.i.-ii.). Initiate SWPPP amendments whenever there is a change in design,

construction, operation, or maintenance at the facility that significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged.

- Ensure that the provisions of any SWPPP amendments are implemented in a timely manner.
- Act as the site Emergency Coordinator.
- Inform the Corporate Environmental Scientist if a spill or release has occurred.
- Maintain a detailed log of all events during cleanup operations.
- Maintain a spill log that includes the following information for chemical and petroleum spills: date, time, amount, location, and reason for spill; date/time clean-up completed, notifications made and staff involved [S9.B.4.b.i.4)i)].
- Prepare and submit final reports on minor spills to the Corporate Environmental Scientist.
- Maintain regular contact with the Corporate Environmental Scientist concerning inspections of material storage and handling facilities, emergency spill response, regulatory interpretation and problem resolution.
- Coordinate the procurement of equipment for spill containment and emergency response with the Corporate Environmental Scientist and the Supply Chain Management.
- Participate in the development of safety inspections and inspection logs with the Corporate Environmental Scientist.
- Be responsible for performing monthly visual inspections of designated equipment, stormwater discharges, and spill response equipment.

	• Notify the Corporate Environmental Scientist if the owner or operator or the applicable local or state regulatory authority determines during inspections or investigations that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. • Maintain the operational copy of the facility SWPPP. • Keep the original copy of all amendments to the SWPPP, and note such amendments on the Amendments and Revisions page at the front of the plan. • Distribute copies of SWPPP amendments to all Avista Corporation personnel that have been provided with a copy of the plan. • Retain the original copies of SWPPP-related inspection records, preventive maintenance records and training records. • Maintain records of discharges from spill containment sumps.
KFGS Assistant Plant Manager	• Upon request, assist the Corporate Environmental Scientist with personnel and equipment for responding to major on-site and off-site emergencies. • Have the authority to dedicate site resources in order to respond to an emergency. • Initiate actions to correct deficiencies found during inspections.
Control Operator	• Notify the KFGS Environmental Scientist of any spills or releases. • During an emergency response, provide services as required under the direction of the Corporate Environmental Scientist and the site Emergency Brigade. • During an emergency or an emergency response drill, relocate emergency response equipment as directed by the Corporate Environmental Scientist or KFGS Environmental Scientist.

Auxiliary Operators & Fuel Equipment Operators	• Drain spill containment sumps. • Contain spills and releases and provide services as required under the direction of the Environmental Scientist. • Report spills and releases to the Control Operator. • Conduct regular surveillance inspections of storage and transfer facilities for oil and hazardous substances and initiate corrective measures as necessary. • Inspect security systems such as access controls, locked storage areas, lighting, fences and traffic controls to ensure that spills do not occur as a result of vandalism or unauthorized entry.
Supply Chain Management	• Coordinate the procurement of equipment for spill containment and emergency response with the Environmental Compliance Coordinator assigned to the station and the local Environmental Coordinator. • Maintain a current inventory of emergency response equipment.

A Stormwater Pollution Prevention Team has been formed by Avista Corporation for the Generating Station in Kettle Falls. The individuals on the team are responsible for developing, implementing, maintaining and modifying the SWPPP.

Section 2. Facility Assessment

Instructions (see S9.B.2.a.- c. pg. 24-25 of the NPDES Waste Discharge Permit No. WA0045217).

The facility assessment must include a description of the facility, an inventory of facility activities and equipment that contribute to or have the potential to contribute any pollutants to stormwater; and, an inventory of materials that contribute to or have the potential to contribute pollutants to stormwater.

2.1. Facility Description

Instructions (see S9.B.2.a. pg. 24 of the NPDES).

The facility description must describe:

- The industrial activities conducted at the site.
- Regular business hours and seasonal variations in business hours or industrial activities.
- The general layout of the facility including buildings and storage of raw materials, and the flow of goods and materials through the facility.

Industrial Activity: The Kettle Falls Generating Station is a wood-waste fired steam-electric power plant operated by Avista Corporation. Constructed in 1983, this station burns about 500,000 tons of Hog Fuel each year, and can produce up to 50 megawatts of electric power. In addition, the station has a small gas turbine and heat recovery system which can run in tandem or independent of the main boiler.

Regular Business Hours: The Kettle Falls Generating Station operates 24 hours a day, seven days a week.

General Layout:

The waste Hog Fuel arrives at the site in trucks from sawmills located within a 200-mile radius of the plant. Receiving equipment weighs and unloads the trucks into a receiving hopper. A conveyor belt, equipped with a self-cleaning magnet and metal detector, transfers the fuel to a disc screen/wood hog for size sorting and reducing.

The facility then uses a traveling ‘tripper’ conveyor along with a swinging boom to transfer the fuel onto live or longer-term storage piles. A bulldozer is used to re-distribute the fuel in the storage pile area. The facility uses an over-the-pile reclaimer to move the fuel from the live storage pile onto a fixed conveyor and then into the plant boiler housed in a seven-story-high fluidized bed boiler.

The facility source of process water is three onsite groundwater wells located adjacent to the Generating Station site (west of Peachcrest Road) as well as make-up water from the City of Kettle Falls. The Generating Station requires process water for the reverse osmosis/electro-deionization systems, ash handling system, the steam cycle, and other miscellaneous uses. The City of Kettle Falls supplies the water for the domestic needs of the Generating Station. The facility uses a circulating water system to meet the Generating Station’s cooling needs. This system includes a conventional mechanical draft cooling tower.

The Generating Station's wastewater treatment system includes two settling basins, a retention basin, and a mixing tank. The settling basins receive the boiler blowdown and miscellaneous flows from the main building sump, RO reject, and any settled solids from the mixing tank. A 474,000-gallon concrete retention basin receives the settling basins overflow and cooling water blowdown. This basin allows retention time for mixing, cooling, and reduction of residual free chlorine levels from the cooling tower blowdown. The mixing tank provides additional settling of solids and a recirculation capacity to the retention pond. Recirculation through the mixing tank continues until temperature, pH, and chlorine meet effluent limits, the flow is then diverted from the mixing tank to the outfall into Lake Roosevelt approximately 125 feet from the shoreline at a normal low water elevation of 1208 feet above mean sea level.

Stormwater from the plant site flows through separate oil/water separators into one of two locations (north and south outfalls). These outfalls both discharge the treated stormwater to a roadside ditch (Peachcrest Road) west of the facility on Avista property. A culvert underneath the road then directs the drainage adjacent to a railway line. For the Hog fuel pile, the facility collects all runoff and applies this water back onto the fuel storage pile.

About 110 tons of fly and bottom ash are generated on a daily basis. The facility trucks this ash offsite for disposal in an Avista-operated solid waste landfill. No stormwater discharges occur from the fly and bottom ash handling systems. The Generating Station periodically removes sediment from the settling, retention, and cooling tower basins which are disposed of in the Stevens County Landfill.

A new truck dumper and conveyor system with associated truck driving lanes east of the fuel pile in a new paved fuel yard was constructed in 2022 and is currently operational. Diesel fuel, which is used for fueling bulldozers, is dispensed from a 20,000 gallon above ground fuel tank situated in a secondary containment sump within the fueling shed (between the fuel pile and the Service Building).

A groundwater treatment system was installed in 2014 to address a diesel release from an underground fuel line. A groundwater treatment building is located south of the facility process water treatment building and additional infrastructure associated with groundwater treatment is located in the subsurface beneath the Hog Fuel storage pile. The groundwater treatment system collects and treats diesel impacted groundwater, and recirculates the treated groundwater, through a series of underground pipes, in a closed loop system.

2.2. Industrial Activity, Materials Inventory, and Associated Pollutants

Instructions (S9.B.2.b.i.- viii. pg. 24-25 of the NPDES Waste Discharge Permit No. WA0045217):

In this section, identify all areas associated with **industrial activities** that have been or may potentially be sources of pollutants, including, but not limited to, the following:

- Loading and unloading of dry bulk materials or liquids.
- Outdoor storage of materials or products.
- Outdoor manufacturing and processing.
- On-site dust or particulate generating processes.
- On-site waste treatment, storage, or disposal.
- Vehicle and equipment fueling, maintenance, and/or cleaning (includes washing).
- Roofs or other surfaces exposed to air emissions from a manufacturing building or a process area
- Roofs or other surfaces composed of materials that may be mobilized by stormwater (e.g., galvanized roofs, galvanized fences, etc.).

Also, identify the types of materials handled at the site that potentially may be exposed to precipitation or runoff and could result in stormwater pollution.

For each **industrial activity** or **exposed material** listed, provide a short narrative (in the **Associated Pollutant** column) describing the potential of pollutant(s) to be present in stormwater discharges. For example:

- Structures and materials with galvanized metal would be a potential source of zinc.

  See *Suggested Practices to Reduce Zinc Concentrations in Industrial Stormwater Discharges:* http://www.ecy.wa.gov/biblio/0810025.html
- Fueling/vehicle maintenance areas would be a potential source of petroleum and other pollutants.
- Yards surfaced with crushed rock or gravel would be a potential source of sediment, turbidity, and other pollutants depending on industrial activity.

The Permittee must update this narrative if/when data become available to verify the presence or absence of these pollutants.

Include a narrative description of any potential sources of pollutants from past activities, materials and spills that were previously handled, treated, stored, or disposed of in a manner to allow ongoing exposure to stormwater. For example,

- A material handling area that has been subject to fertilizer spills would be a potential source of phosphorus, nitrogen and other pollutants.

  Include the method and location of on-site storage or disposal. List significant spills and significant leaks of toxic or hazardous pollutants.

Hog Fuel transported to the site by truck is unloaded by two truck dumpers to a belt conveyor, which moves roughly 300 tons of Hog Fuel per hour past a self-cleaning magnet and metal detector to a disc screen. The magnet and metal detector remove any tramp iron from the wood, and the disc screen separates the wood according to size. Oversize material is routed to a hammer mill.

The Generating Station uses two stack out systems. The first system uses a traveling tripper conveyor to distribute Hog Fuel to the fuel storage pile, where a bulldozer pushes the fuel into the storage area. The second system employs a swinging boom to distribute the fuel onto the live storage pile. From the live storage pile, an over-the-pile reclaimer moves the fuel onto a conveyor for transport into the power plant. The outside storage area is uncovered and provides 90 days of storage capacity.

In the powerhouse, a drag-chain conveyor system carries the Hog Fuel to six fuel-feeder bins mounted on the plant boiler. Excess fuel is returned to the wood storage area.

Ash from combustion of Hog Fuel is collected in a two-stage control system. Cyclone separators capture the large ash particles and char. An electrostatic precipitator collects smaller particulate. After passing through the two stages of this control system, flue gas is dispersed from a 180-foot-high stack. The ash is removed to a single transfer conveyor and routed to a covered bunker for eventual disposal at a solid waste landfill operated by Avista Corporation. The ash (both bottom ash and fly ash) is transported by dump truck to the Avista operated solid waste landfill, approximately 1.5 miles away.

The remainder of the yard is used for storage of miscellaneous large equipment. Vehicle and equipment washing is performed occasionally outside the Maintenance Shop, which is located in the northeast corner of the Maintenance and Administration Building.

Much of the traffic areas within the facility are paved but there are sections of road around the perimeter of the facility that are unpaved. Some of these sections are treated with lignon sulfonate to control the generation of fugitive dust.

Industrial Activity / Exposed Materials	Associated Pollutants
Delivery Truck Dumping / wood waste	Wood chips/fines, hydraulic oil
Hammer Mill Operation / ground wood	Wood chips/fines, hydraulic oil
Fuel Pile Storage and Handling	Wood chips and fines
Fuel Conveying To/From Boiler Building	Wood chips/fines, hydraulic oil
Diesel Storage/Fueling Stations	Diesel
Groundwater Remediation System	Oil products/ Nitrate solution
Water treatment chemicals unloading	Sulfuric acid/Caustic
Electrical Oil-Filled Equipment	Transformer Cooling Oil
Mobile Equipment Operations & Maintenance	Lubricating oils and fuel
Unpaved Roads	Dust and sediment
Ash Management	Hog Fuel ash

2.3. Spills and Leaks

Instructions

- Include the following in this section:
  - **Potential spills and leaks:** A description of where potential spills and leaks could occur at your site that could contribute pollutants to your stormwater discharge, and specify which outfall(s) are likely to be affected by such spills and leaks.
  - **Past spills and leaks (Use Worksheet #4):** A description of significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance.
- *Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602.*

Areas of Site Where Potential Spills/Leaks Could Occur

Location	Outfalls
Truck dumper/wood screening	SW-South
Fuel conveyors	SW-South
Water treatment chemicals unloading	SW-South
Diesel fuel storage/dispensing	SW-South
Groundwater Remediation System chemicals unloading	SW-South
Facility substation	SW-North
Facility switchyard	SW-North
Ash sump	SW-North

Section 3. Best Management Practices (BMPs)

Instructions (See S9.B.4. pg 25 of the NPDES Waste Discharge Permit No. WA0045217):

You must describe each Best Management Practice (BMP) selected to eliminate or reduce the potential to contaminate *stormwater* and prevent violations of *water quality standards*.

- By December 31, 2022, you must include and implement each of the mandatory BMPs listed in the permit, including the BMPs from the 2019 Stormwater Management Manual for Eastern Washington or equivalent manuals, listed as "applicable" to certain industrial activities/facilities.
- Appendix E of this Template contains the BMPs from the Stormwater Management Manuals that are applicable to certain industrial activities or facilities. "Cut" each applicable BMP that pertains to your type industrial activity/facility from Appendix E, and "paste" them into the appropriate section(s).
- The Permittee may omit individual (mandatory or applicable) BMPs if site conditions render the BMP unnecessary, infeasible, or the Permittee provides alternative and equally effective BMPs; if the Permittee clearly justifies each BMP omission in the SWPPP. For example:
  - The permit requirement to have a spill kit located within 25' of fueling areas would not be necessary at a facility that does not have on-site fueling. The SWPPP should state that the spill kit BMP has been omitted from the SWPPP because it is unnecessary.

3.1 Operational Source Control BMPs

Instructions (see S9.B.4.b.i.2 Good Housekeeping pg. 26 of the NPDES Waste Discharge Permit No. WA0045217):

Describe BMPs implemented for ongoing maintenance and cleanup of areas which may contribute pollutants to stormwater discharges. The SWPPP must include the schedule/frequency for completing each housekeeping task, based upon industrial activity, sampling results and/or observations made during inspections. At a minimum, following Good Housekeeping BMPs are mandatory. The Permittee may omit individual "mandatory" BMPs if site conditions render the BMP unnecessary, infeasible, or the Permittee provides alternative and equally effective BMPs; if the Permittee clearly justifies each BMP omission in the SWPPP.

<u>Mandatory Operational Source Control Good Housekeeping BMPs Required by Condition S9. of the Permit</u>:

Good Housekeeping:

- Vacuum paved surfaces with a vacuum sweeper (or a sweeper with a vacuum attachment) to remove accumulated pollutants once per quarter.
- Identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation.
- Keep all dumpsters under cover or fit with a lid that must remain closed when not in use.

Operational Source Control BMPs for Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots:

- Sprinkle or wet down soil or dust with water as long as it does not result in runoff.
- Use only dust suppressant chemicals that are approved by the local jurisdiction and/or state government, such as those listed in *Methods for Dust Control* (Ecology, 2016c).
- Avoid excessive and repeated applications of dust suppressant chemicals. Time the application of dust suppressants to avoid or minimize their wash-off by rainfall or human activity, such as irrigation.
- Apply stormwater containment to prevent the conveyance of sediment into storm drains or receiving waters.
- Protect inlets/catch basins during application of dust suppressants.
- Ecology prohibits the use of motor oil for dust control. Take care when using lignin derivatives and other chemicals with a high biochemical oxygen demand in areas susceptible to contamination of surface water or ground water.

  Consult with the Washington State Department of Ecology and the local permitting authority on discharge permit requirements if the dust suppression process results in a discharge to the ground, ground water, storm drain, or surface water.
- Street gutters, sidewalks, driveways, and other paved surfaces in the immediate area of industrial activity must be swept regularly to collect and properly dispose of loose debris and garbage.
- Install catch basin filter socks on site and in surrounding catch basins to collect sediment and debris. Maintain the filters regularly to prevent plugging.

Operational Source Control BMPs for Fueling At Dedicated Stations:

- Prepare a spill prevention control and countermeasures (SPCC) plan.
- Train employees on the proper use of fuel dispensers and on the spill plan.
- Have designated trained person(s) available either on-site or on call at all times to promptly and properly implement the spill plan and immediately cleanup all spills.
- If the fueling station is unattended by a trained person during operating hours, the spill plan must be visible to all customers and untrained employees using the station, and the spill kit must also be accessible and fully stocked at all times.
- The person conducting the fuel transfer must be present at the fueling pump during fuel transfer, particularly at unattended or self-serve stations.
- Keep suitable cleanup materials, such as dry adsorbent materials, on-site to allow prompt cleanup of a spill.
- Do not use dispersants to clean up spills or sheens.
- Post signs in accordance with the Uniform Fire Code (UFC) or International Fire Code (IFC). For example, post “No Topping Off” signs (topping off gas tanks causes spillage and vents gas fumes to the air).
- Make sure that the automatic shut-off on the fuel nozzle is functioning properly.

Operational Source Control BMPs for Landscaping and Lawn/Vegetation Management:

Landscaping:

- Install engineered soil/landscape systems to improve the infiltration and regulation of stormwater in landscaped areas.
- Do not dispose of collected vegetation into waterways or storm drainage systems.

Pesticides:

- The facility performs herbicide treatment of substations. No herbicides are stored at the facility. The facility contracts the services of a licensed pest control contractor for the remainder of its pest control needs.

Operational Source Control BMPs for Loading and Unloading Areas for Liquid or Solid Material:

All Loading/Unloading Areas:

- A significant amount of debris can accumulate at outside, uncovered loading/unloading areas. Sweep these surfaces frequently to remove material that could otherwise be washed off by stormwater. Sweep outside areas that are covered for a period of time by containers, logs, or other material after the areas are cleared.
- Place drip pans, or other appropriate temporary containment device, at locations where leaks or spills may occur such as hose connections, hose reels and filler nozzles. Drip pans shall always be used when making and breaking connections (see Figure 2.2). Check loading/unloading equipment such as valves, pumps, flanges, and connections regularly for leaks and repair as needed.

Tanker Truck to Above -ground Storage Tanks:

- To minimize the risk of accidental spillage, prepare an "Operations Plan" that describes procedures for loading/unloading (see Spill Prevention Control and Countermeasures plan). Train the employees, especially fork lift operators, in its execution and post it or otherwise have it readily available to employees.
- Report spills of reportable quantities to Ecology (refer to Section 2.1 for telephone numbers of Ecology Regional Offices) as per the Spill Control Plan.
- Prepare and implement an Emergency Spill Cleanup Plan for the facility (BMP Spills of Oil and Hazardous Substances) which includes the following BMPs (See Spill Control Plan):
  - Ensure the clean up of liquid/solid spills in the loading/ unloading area immediately, if a significant spill occurs, and, upon completion of the loading/unloading activity, or, at the end of the working day.
  - Retain and maintain an appropriate oil spill cleanup kit on-site for rapid cleanup of material spills. (See BMP Spills of Oil and Hazardous Substances).
  - Ensure that an employee trained in spill containment and cleanup is present during loading/unloading.

Operational Source Control BMPs for Maintenance and Repair of Vehicles and Equipment:

- Inspect for leaks all incoming vehicles, parts, and equipment stored temporarily outside.
- Use drip pans or containers under parts or vehicles that drip or that are likely to drip liquids, such as during dismantling of liquid containing parts or removal or transfer of liquids.

- Remove batteries and liquids from vehicles and equipment in designated areas designed to prevent stormwater contamination. Store cracked batteries in a covered non-leaking secondary containment system.
- Remove liquids from vehicles retired for scrap.
- Empty oil and fuel filters before disposal. Provide for proper disposal of waste oil and fuel.
- Do not pour/convey washwater, liquid waste, or other pollutant into storm drains or to surface water. Check with the local sanitary sewer authority for approval to convey to a sanitary sewer.
- Do not connect maintenance and repair shop floor drains to storm drains or to surface water.
- To allow for snowmelt during the winter, a drainage trench with a sump for particulate collection can be installed and used only for draining the snowmelt and not for discharging any vehicular or shop pollutants.

Operational Source Control BMPs for Maintenance of Public and Private Utility Corridors and Facilities:

- Minimize the amount of herbicides and other pesticides used to maintain access roads and facilities. When water or sediments are removed from electric transformer vaults, determine whether contaminants might be present before disposing of the water and sediments. This includes inspecting for the presence of oil or sheen, and determining from records or testing if the transformers contain PCBs. If records or tests indicate that the sediment or water are contaminated above applicable levels, manage these media in accordance with applicable federal and state regulations, including the federal PCB rules (40 CFR 761) and the state MTCA cleanup regulations (Chapter 173-340 WAC). Water removed from the vaults can be discharged in accordance with the federal 40 CFR 761.79, and state regulations (Chapter 173-201A WAC and Chapter 173-200 WAC), or via the sanitary sewer if the requirements, including applicable permits, for such a discharge are met.
- Stabilize access roads or areas of bare ground with gravel, crushed rock, or another method to prevent erosion. Use and manage vegetation to minimize bare ground/soils that may be susceptible to erosion.
- Provide maintenance practices to prevent stormwater from accumulating and draining across and/or onto roadways. Convey stormwater through roadside ditches and culverts. The road should be crowned, sloped outward, water barred, or otherwise left in a condition not conducive to erosion. Appropriately maintaining grassy roadside ditches discharging to surface waters is an effective way of removing some pollutants associated with sediments carried by stormwater.

Maintain ditches and culverts at an appropriate frequency to ensure that plugging and flooding across the roadbed, with resulting overflow erosion, does not occur.

Operational Source Control BMPs for Maintenance of Roadside Ditches:

- Inspect roadside ditches regularly, as needed, to identify sediment accumulations and localized erosion.
- Clean ditches on a regular basis, as needed. Ditches should be kept free of rubbish and debris.
- Vegetation in ditches often prevents erosion and cleanses runoff waters. Remove vegetation only when flow is blocked or excess sediments have accumulated. Conduct ditch maintenance (seeding, fertilizer application, harvesting) in late spring and/or early fall, where possible. This allows vegetative cover to be re-established by the next wet season thereby minimizing erosion of the ditch as well as making the ditch effective as a biofilter.

- Do not apply fertilizer unless needed to maintain vegetative growth.
- In the area between the edge of the pavement and the bottom of the ditch, commonly known as the "bare earth zone", use grass vegetation, wherever possible. Vegetation should be established from the edge of the pavement if possible, or at least from the top of the slope of the ditch.
- Maintain diversion ditches on top of cut slopes that are constructed to prevent slope erosion by intercepting surface drainage to retain their diversion shape and capability.
- Use temporary erosion and sediment control measures or revegetate as necessary to prevent erosion during ditch reshaping. Do not leave ditch cleanings on the roadway surfaces. Sweep, collect, and dispose of dirt and debris remaining on the pavement at the completion of ditch cleaning operations.
- Consider screening roadside ditch cleanings, not contaminated by spills or other releases and not associated with a runoff treatment BMP such as a biofiltration swale, to remove litter. Separate screenings into soil and vegetative matter (leaves, grass, needles, branches, etc.) categories. Compost or dispose of the vegetative matter in a municipal waste landfill. Consult with the jurisdictional health department to discuss use or disposal options for the soil portion.
- Roadside ditch cleanings contaminated by spills or other releases known or suspected, to contain dangerous waste must be handled following the Dangerous Waste Regulations (Chapter 173-303 WAC). If testing determines materials are not dangerous waste but contaminants are present, consult with the jurisdictional health department for disposal options.
- Examine culverts on a regular basis for scour or sedimentation at the inlet and outlet, and repair as necessary. Give priority to those culverts conveying perennial and/or salmon bearing streams and culverts near streams in areas of high sediment load, such as those near subdivisions during construction. Maintain trash racks to avoid damage, blockage, or erosion of culverts.

<u>Operational Source Control BMPs for Maintenance of Stormwater Drainage and Treatment Systems:</u>

- Inspect and clean treatment BMPs, conveyance systems, and catch basins as needed, and determine whether improvements in O & M are needed.
- Promptly repair any deterioration threatening the structural integrity of the facilities. These include replacement of clean-out gates, catch basin lids, and rock in emergency spillways.
- Ensure that storm sewer capacities are not exceeded and that heavy sediment discharges to the sewer system are prevented.
- Regularly remove debris and sludge from BMPs used for peak-rate control, treatment, etc., and truck to a disposal site that is approved by the local jurisdiction or state government.
- Clean catch basins when the depth of deposits reaches 60% of the sump depth as measured from the bottom of basin to the invert of the lowest pipe into or out of the basin. However, in no case should there be < 6 inches clearance from the debris surface to the invert of the lowest pipe. Some catch basins (e.g., Washington State Department of Transportation Type 1L basins) may have as little as 12 inches sediment storage below the invert. These catch basins need frequent inspection and cleaning to prevent scouring. Where these catch basins are part of a drainage system, the system owner/operator may choose to concentrate maintenance efforts on downstream control devices as part of a systems approach. Clean woody debris in a catch basin as frequently as needed to ensure proper operation of the catch basin.

- Post warning signs; “Dump No Waste - Drains to Ground Water,” “Streams,” “Lakes,” or emboss on or adjacent to all storm drain inlets where practical.
- Disposal of sediments and liquids from the catch basins must comply with “Recommendations for Management of Street Wastes” described in Appendix IV-G of this volume.

Operational Source Control BMPs for Painting/Finishing/ Coating of Vehicles/Boats/ Buildings/ Equipment:

- Train employees in the careful application of paints, finishes, and coatings to reduce misuse and over spray. Use drop cloths underneath outdoor painting, scraping, sandblasting work, and properly clean and temporarily store collected debris daily.
- Wipe up spills with rags and other absorbent materials immediately. Do not hose down the area to a storm drain, receiving water, or conveyance ditch.
- Use a catch basin cover, filter sock, or other effective runoff control device if dust, grit, washwater, or other pollutants may escape the work area and enter a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.
- Use a ground cloth, pail, drum, drip pan, tarpaulin, or other protective device for activities such as outdoor paint mixing and tool cleaning or where spills can contaminate stormwater.
- Properly dispose of all wastes and prevent all uncontrolled releases to the air, ground, or water.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers.
- Clean brushes and tools covered with non-water-based paints, finishes, or other materials in a manner that allows collection of used solvents (e.g., paint thinner, turpentine, and xylol) for recycling or proper disposal.
- Store toxic materials under cover (e.g., tarpaulin) during precipitation events and when not in use to prevent contact with stormwater.

Operational Source Control BMPs for Parking and Storage of Vehicles and Equipment:

- If a parking lot must be washed, discharge the washwater to a sanitary sewer, if allowed by the local sewer authority or other approved wastewater treatment system, or collect washwater for off-site disposal.
- Do not hose down the area to a storm drain or receiving water. Vacuum sweep parking lots, storage areas, and driveways regularly to collect dirt, waste, and debris.
- Clean up vehicle and equipment fluid drips and spills immediately.
- Place drip pans below inoperative or leaking vehicles and equipment in a manner that catches leaks or spills, including employee vehicles.

Operational Source Control BMPs for Soil Erosion and Sediment Control at Industrial Sites:

- Limit the exposure of erodible soil.
- Stabilize entrances/exits to prevent track-out. See BMP C105E: Stabilized Construction Access.
- Stabilize or cover erodible soil to prevent erosion. Cover practice options include the following:

- Use of vegetative cover such as grass, trees, or shrubs on erodible soil areas.
- Coverage with mats such as clear plastic, jute, or synthetic fiber.
- Preservation of natural vegetation including grass, trees, shrubs, and vines when possible.

- If stabilizing or covering the erodible soil is not possible, then structural controls must be implemented. Structural practice options include the following:
  - Vegetated swale
  - Sedimentation basin
  - Proper grading

Operational Source Control BMPs for Spills of Oil and Hazardous Substances:

The following BMPs are met by implementation of the Spill Prevention, Control, and Countermeasures Plan.

- Prepare an Emergency Spill Control Plan (SCP), which includes the following:
  - A description of the facility including the owner's name and address;
  - The nature of the activity at the facility;
  - The general types of chemicals used or stored at the facility;
  - A site plan showing the location of storage areas for chemicals, the locations of storm drains, the areas draining to them, and the location and description of any devices to stop spills from leaving the site such as positive control valves;
  - Cleanup procedures;
  - Notification procedures to be used in the event of a spill, such as notifying key personnel. Agencies such as Ecology, local fire department, Washington State Patrol, and the local Sewer Authority, shall be notified;
  - The name of the designated person with overall spill cleanup and notification responsibility;

- Train key personnel in the implementation of the Emergency SCP. Prepare a summary of the plan and post it at appropriate points in the building, identifying the spill cleanup coordinators, location of cleanup kits, and phone numbers of regulatory agencies to be contacted in the event of a spill;
- Update the SCP regularly;
- Immediately notify Ecology and the local Sewer Authority if a spill may reach sanitary or storm sewers, ground water, or surface water, in accordance with federal and Ecology spill reporting requirements;
- Immediately clean up spills. Do not use emulsifiers for cleanup unless an appropriate disposal method for the resulting oily wastewater is implemented. Absorbent material shall not be washed down a floor drain or storm sewer; and,
- Locate emergency spill containment and cleanup kit(s) in high potential spill areas. The contents of the kit shall be appropriate for the type and quantities of chemical liquids stored at the facility.

Operational Source Control BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers:

The following BMPs are addressed in the Avista Hazardous Waste Management Plan.

- Place tight-fitting lids on all containers.
- Label all containers with their contents, accumulation start date, and owner information.
- Place drip pans beneath all mounted container taps and at all potential drip and spill locations during filling and unloading of containers.
- Inspect container storage areas regularly for corrosion, structural failure, spills, leaks, overfills, and failure of piping systems. Check containers daily for leaks/spills. Replace containers, and replace and tighten bungs in drums as needed.
- Businesses accumulating Dangerous Wastes that do not contain free liquids need only to store these wastes in a sloped designated area with the containers elevated or otherwise protected from storm water runon.
- Drums stored in an area where unauthorized persons may gain access must be secured in a manner that prevents accidental spillage, pilferage, or any unauthorized use.
- If the material is a Dangerous Waste, the business owner must comply with any additional Ecology requirements as required.
- Storage of reactive, ignitable, or flammable liquids must comply with the Uniform Fire Code.
- Provide spill kits or cleanup materials near container storage areas.
- Clean up all spills immediately.
- Cover dumpsters, or keep them under cover such as a lean-to, to prevent the entry of stormwater. Replace or repair leaking garbage dumpsters.
- Drain dumpsters and/or dumpster pads to sanitary sewer. Keep dumpster lids closed. Install waterproof liners.

Operational Source Control BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products:

- Do not hose down the contained stockpile area to a storm drain or a conveyance to a storm drain or to a receiving water.
- Do not discharge stormwater runoff from the Hog Fuel pile storage area into surface waters of the State. Runoff water must be collected and redirected back onto the fuel pile.
- Have fire hydrant flushing coincide with storm drain flushing to make the best use of water.
- If possible, design flushing to convey accumulated material to strategic locations, such as to the sanitary sewer or to a runoff treatment BMP; thus, preventing resuspension and overflow of a portion of the solids during storm events.
- If possible, conduct flushing and tank maintenance activities on non-rainy days and during the time of year that poses the least risk to aquatic biota.

Operational Source Control BMPs for Labeling Storm Drain Inlets:

- Label storm drain inlets in areas where contributions or dumping to storm drains is likely.
- Stencil or apply storm drain markers adjacent to storm drains to help prevent the improper disposal of pollutants. Or, use a storm drain grate stamped with warnings against polluting.
- Place the marker in clear sight facing toward anyone approaching the inlet from either side.
- Use a brief statement and/or graphical icons to discourage illegal dumping. Examples:
  - "No Dumping – Drains to Stream"
  - "Dump No Waste – Drains to Lake"
- Check with your local jurisdiction to find out if they have approved specific signage and / or storm drain message placards for use. Consult the local jurisdiction to determine specific requirements for placard types and methods of application.
- Maintain the legibility of markers and signs. Signage on top of curbs tends to weather and fade. Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.
- When painting stencils or installing markers, temporarily block the storm drain inlet so that no pollutants are discharged from the labeling activities.

Instructions (see S9.B.4.b.i.3 Preventative Maintenance pg. 26 of the NPDES Waste Discharge Permit No. WA0045217):

Describe BMPs to inspect and maintain the stormwater drainage, source controls and treatment systems, and plant equipment and systems that could fail and result in contamination of stormwater. The SWPPP shall include the schedule/frequency for completing each maintenance task.

Preventive Maintenance:

- Clean catch basins on an as needed basis, but no longer than once every two years.
- Inspect all equipment and vehicles during monthly site inspections for leaking fluids such as oil, antifreeze, etc. Take leaking equipment and vehicles out of service or prevent leaks from spilling on the ground until repaired.
- Immediately clean up spills and leaks (e.g., using absorbents, vacuuming, etc.) to prevent the discharge of pollutants.

Spill Prevention and Emergency Cleanup:

Instructions (see S9.B.4.b.i.4 Spill Prevention and Emergency Cleanup Plan pg. 27 of the NPDES Waste Discharge Permit No. WA0045217):

Include a Spill Prevention and Emergency Cleanup Plan (SPECP) that includes BMPs to prevent spills that can contaminate stormwater. The SPECP shall specify BMPs for material handling procedures, storage requirements, cleanup equipment and procedures, and spill logs, as appropriate.

- Describe any BMPs or procedures used to minimize the potential for leaks, spills, and other releases.
- Describe where each BMP is to be located or where applicable procedures will be implemented (pg 17-18, S3.B.4.b.i.4.a-i) at your site.
- Note: Some facilities may be required to develop a Spill Prevention Control and Countermeasure (SPCC) plan under a separate regulatory program (40 CFR 112). If you are required to develop an SPCC plan, or you already have one, you should include references to the relevant requirements from your plan. Such a plan may be included by reference if it contains these necessary elements.)

Spill Prevention and Emergency Cleanup:

All BMPs under this heading are addressed in the Spill Control Plan.

- Store all chemical liquids, fluids, and petroleum products, on an impervious surface that is surrounded with a containment berm or dike capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater.
- Prevent precipitation from accumulating in containment areas with a roof or equivalent structure or include a written plan on how it will manage and dispose of accumulated water if a containment area cover is not practical.
- Locate spill kits within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units. At a minimum, spill kits shall include:
    - Oil absorbents capable of absorbing 15 gallons of fuel.
    - A storm drain plug or cover kit.
    - A non-water containment boom, a minimum of 10 feet in length with a 12-gallon absorbent capacity.
    - A non-metallic shovel.
    - Two five-gallon buckets with lids.
- Do not lock shut-off fueling nozzles in the open position. Do not “topoff” tanks being refueled.
- Block, plug or cover storm drains that receive runoff from areas where fueling, during fueling.
- Use drip pans or equivalent containment measures during all petroleum transfer operations.

- Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas).
- Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible. Drain fluids from equipment and vehicles prior to on-site storage or disposal.
- Maintain a spill log that includes the following information for chemical and petroleum spills: date, time, amount, location, and reason for spill; date/time clean-up completed, notifications made and staff involved.

Employee Training

Instructions (see S3.B.4.b.i.5 Employee Training) pg. 18 of the NPDES Waste Discharge Permit No. WA0045217):

— Describe BMPs for training the employees who work in areas of industrial activities subject to the Permit, including all members of your Pollution Prevention Team.

Be sure to address the following items in this section:

- The content of the training:
  - An overview of what is in the SWPPP.
  - How employees make a difference in complying with the SWPPP and preventing contamination of stormwater.
  - Spill response procedures, good housekeeping, maintenance requirements, and material management practices.
- How the Permittee will conduct training.
- The frequency/schedule of training. The Permittee shall train employees annually, at a minimum.
- A log of the dates on which specific employees received training.

TRAINING PLAN FOR KFGS PERSONNEL

Employee training is essential to the effective implementation of the SWPPP. The purpose of the employee training program is to inform personnel at all levels of responsibility of the objectives and goals of the SWPPP. Employee training will therefore address each component of the SWPPP, especially operational and source control BMPs. Training topics will also include good housekeeping and material management practices, as well as spill prevention and response. As deemed necessary, facility operators will also receive training in the pollution control laws and regulations, this SWPPP, and the specific features of the facility which are intended to prevent releases of oil and petroleum products.

KFGS has meeting rooms in the Administration building that will be used for training. Training will be conducted by the Environmental Scientist with participation by Site management and supervisory personnel.

Training of personnel will be conducted annually and a record of the training will be documented on dated sign-in sheets.

Inspections and Recordkeeping

Instructions (see S9.B.4.b.i.6 Inspections and Recordkeeping pg. 28 of the NPDES Waste Discharge Permit No. WA0045217):

- The Permittee must conduct and document visual inspections of the site each month.
- The Permittee must ensure that inspections are conducted by qualified personnel.
- Definition: *Qualified Personnel* means people who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by this permit.
- Describe the documentation procedures for inspections and recordkeeping below. Documentation of monthly inspections must be kept on-site available for Ecology inspection (use Inspection Report Form in Appendix F).

The SWPPP must include documentation of procedures to ensure compliance with permit requirements for inspections and recordkeeping.

- Identify facility personnel who will inspect designated equipment and facility areas as required in Permit Condition S10. See Section 1.5 of this plan.
- Contain a visual inspection report or check list that includes all items required by Permit Condition S10.C.
- Provide a tracking or follow-up procedure to ensure that a report is prepared and any appropriate action taken in response to visual inspections.
- Define how the Permittee will comply with signature requirements and records retention identified in Special Condition S9, Reporting and Recordkeeping Requirements.
- Include a certification of compliance with the SWPPP and permit for each inspection using the language in S10.C.1.c.

INSPECTIONS AND RECORDKEEPING PLAN

INSPECTIONS

A. <u>Inspection Frequency and Personnel</u>

1. Visual inspections of the site will be conducted and documented each month.
2. The inspections will be conducted by *qualified personnel* (KFGS Environmental Scientist).

B. <u>Inspection Components</u>

Each inspection will include:

1. Observations made at *stormwater* observation locations and areas where *stormwater* associated with *industrial activity* is discharged off-site; or discharged to *waters of the state,* or to a *storm sewer* system that drains to *waters of the state.*
2. Observations for the presence of floating materials, visible oil sheen, discoloration, *turbidity,* odor, etc. in the *storm water* discharge(s).

3. Observations for the presence of *illicit discharges* such as *domestic wastewater, noncontact cooling water,* or *process wastewater* (including *leachate).*
    a. If an *illicit discharge* is discovered, *Ecology* will be notified within seven days.
    b. KFGS will eliminate the *illicit discharge* within 30 days.
4. A verification that the descriptions of potential *pollutant* sources required under this permit are accurate.
5. A verification that the site map in the SWPPP reflects current conditions.
6. An assessment of all BMPs that have been implemented, noting all of the following:
    a. Effectiveness of BMPs inspected.
    b. Locations of BMPs that need maintenance.
    c. Reason maintenance is needed and a schedule for maintenance.
    d. Locations where additional or different BMPs are needed and the rationale for the additional or different BMPs.

C. Inspection Results

1. The results of each inspection will be recorded in an inspection report or checklist and be kept on-site for Ecology review. Each inspection report will document the observations, verifications and assessments required in S10.B, including:
    a. Time and date of the inspection.
    b. Locations inspected.
    c. Statements that, in the judgment of 1) the person conducting the site inspection, and 2) the person described in Condition G2., the site is either in compliance or out of compliance with the terms and conditions of the SWPPP and this Permit.
    d. A summary report and a schedule of implementation of the remedial actions that are planned if the site inspection indicates that the site is out of compliance. The remedial actions taken will meet the requirements of the SWPPP and the Permit.
    e. Name, title, and signature of the person conducting site inspection; and the following statement: "I certify that this report is true, accurate, and complete, to the best of my knowledge and belief."
    f. Certification and signature of the person described in Permit Condition G1.a, first bullet, or a duly authorized representative of the facility, in accordance with Permit Condition G.1.a, second bullet.

D. Reports of Non-Compliance

Reports of non-compliance identified during an inspection will be prepared in accordance with the requirements of Permit Condition S3.F.

REPORTING AND RECORDKEEPING (see S3.C on page 14 and S3.H. on page 16 of the NPDES Waste Discharge Permit No. WA0045217)

A. Records Retention

The Permittee must retain records of all monitoring information for **a minimum of three years**. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by the Permit, and records of all data used to complete the application for the Permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology. The Permittee must keep a copy of the Permit at the facility and make it available upon request to Ecology inspectors.

Illicit Discharges

Instructions (see S9.B.4.b.i.7. pg. 29 of the NPDES Waste Discharge Permit No. WA0045217):

- The SWPPP must include measures to identify and eliminate the discharge of process wastewater, domestic wastewater, noncontact cooling water, and other illicit discharges, to stormwater sewers, or to surface waters and ground waters of the state.
- The Permittee can find BMPs to identify and eliminate illicit discharges in Volume IV of Ecology's SWMM for Western Washington and Chapter 8 of the 2019 SWMM for Eastern Washington: Water from washing vehicles or equipment, steam cleaning and/or pressure washing is considered process wastewater. The Permittee must not allow this process wastewater to comingle with stormwater or enter storm drains; and must collect in a tank for off-site disposal, or discharge it to a sanitary sewer, with written approval from the local sewage authority.
- The following text would be an acceptable way to address this permit condition and should be retained or modified, as appropriate.

Water from washing vehicles or equipment, steam cleaning and/or pressure washing is considered process wastewater. The Permittee must not allow this process wastewater to comingle with stormwater or enter storm drains; and must collect in a tank for off-site disposal, or discharge it to a sanitary sewer, with written approval from the local sewage authority.

During each monthly inspection, look for signs of illicit discharges, especially during dry weather when stormwater isn't discharging from the site. Each semi-annual site inspection will include:

- Observations made at stormwater observation locations (Outfall SW-N and Outfall SW-S) and areas where stormwater associated with industrial activity is discharged off-site; or discharged to waters of the state, or to a storm sewer system that drains to waters of the state.
- Observations for the presence of floating materials, visible oil sheen, discoloration, turbidity, odor, etc. in the stormwater discharge(s).
- Observations for the presence of illicit discharges such as domestic wastewater, noncontact cooling water, or process wastewater (including leachate).
    - If an illicit discharge is discovered, the Permittee shall notify Ecology within seven days.
    - The Permittee shall eliminate the illicit discharge within 30 days.

3.2. Structural Source Control BMPs

Instructions (see S9.B.4.ii. Structural Source Control pg. 19 of the NPDES Waste Discharge Permit No. WA0045217):

Describe BMPs to minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and *runoff* by either locating these industrial materials and activities inside or protecting them with storm resistant coverings.

The SWPPP must include the Structural Source Control BMPs listed as "applicable" in Ecology's SWMMs, or other guidance documents or manuals approved in accordance with S9.A.3.c.

The SWPPP must include BMPs to minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings.

Mandatory Structural Source Control BMPs Required by Condition S3. of the Industrial Stormwater General Permit:

- Use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas.
- Perform all cleaning operations indoors, under cover, or in bermed areas that prevent stormwater runoff and run-on and also that capture any overspray.
- Ensure that all washwater drains to a collection system that directs the washwater to further treatment or storage and not to the stormwater drainage system.

Structural Source Control BMPs for Fueling At Dedicated Stations:

- Design the fueling island to:
    - Minimize stormwater contamination,
    - Control spills (dead-end sump or spill control separator in compliance with the UFC or IFC), and
    - Collect stormwater and/or wastewater and direct it to an appropriate treatment system.
- Slope the concrete containment pad around the fueling island toward drains; either trench drains, catch basins and/or a dead-end sump. The slope of the drains shall not be < 1% (Section 7901.8 of the UFC or Section 5703.6.8 of the IFC).
- Drains to runoff treatment BMPs must have a normally closed shutoff valve, which must be closed in the event of a spill. The spill control sump must be sized in compliance with Section 7901.8 of the UFC or Section 5703.6.8 of the IFC.
- Design the fueling island as a spill containment pad with a sill or berm raised to a minimum of 4 inches (Section 7901.8 of the UFC or Section 5703.6.8 of the IFC) to prevent the runoff of spilled liquids and to

prevent run-on of stormwater from the surrounding area. Raised sills are not required at the open-grate trenches that connect to an approved drainage-control system.

- The fueling pad must be paved with Portland cement concrete, or equivalent. Ecology does not consider asphalt an equivalent material.
- The fueling island must have a roof or canopy to prevent the direct entry of precipitation onto the spill containment pad. The roof or canopy should, at a minimum, cover the spill containment pad (within the grade break or fuel dispensing area) and preferably extend 3 feet on each side for roofs and canopies ≤ 10 feet in height and 5 feet on each side for roofs and canopies > 10 feet in height. Overhangs reduce the introduction of windblown rain. Measure the overhang relative to the berm or other hydraulic grade break for the spill containment pad.
- Convey all roof drains to storm drains outside the fueling containment area.
- Convey stormwater collected on the fuel island containment pad to a sanitary sewer system if approved by the sanitary authority, or to an approved runoff treatment BMP such as an oil and water separator and a basic treatment BMP.
- Discharges from runoff treatment BMPs to storm drains or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain oil and grease (O&G).
- Alternatively, collect stormwater from the fuel island containment pad and hold for proper offsite disposal.
- Transfer the fuel from the delivery tank trucks to the fuel storage tank in impervious contained areas and ensure that appropriate overflow protection is used. Alternatively, cover nearby storm drains during the filling process and use drip pans under all hose connections.

<u>Structural Source Control BMPs for Loading and Unloading Areas for Liquid or Solid Material</u>:

All Loading/ Unloading Areas:

Storage of flammable, ignitable, and reactive chemicals and materials must comply with the stricter of the local zoning codes, the local fire codes, the Uniform Fire Code (UFC), the UFC standards, or the National Electric Code. Consistent with UFC requirements and to the extent practicable, conduct unloading or loading of solids and liquids in a manufacturing building or under a roof, lean-to, or other appropriate cover.

- Berm, dike, and/or slope the loading/unloading area to prevent run-on of stormwater and to prevent the runoff or loss of any spilled material from the area.
- Place curbs along the edge of the loading/unloading areas or slope the edge such that the stormwater can flow to an internal drainage system that leads to an approved runoff treatment BMP. Avoid draining directly to the surface water from loading/unloading areas.
- Pave and slope loading/unloading areas to prevent the pooling of water. Minimize the use of catch basins and drain lines within the interior of the paved area or place catch basins in designated “alleyways” that are not covered by material, containers, or equipment.

Retain on-site the necessary materials for rapid cleanup of spills.

Loading and Unloading Docks:

- Install/maintain overhangs or door skirts that enclose the trailer end to prevent contact with rainwater.
- Design the loading/unloading area with berms, sloping, etc., to prevent the run-on of stormwater.

Tanker Truck Transfer Areas to Above/Below-Ground Storage Tanks:

- Pave the area on which the transfer takes place. If any transferred liquid, such as gasoline, is reactive with asphalt pave the area with Portland cement concrete.
- Slope, berm, or dike the transfer area to a dead-end sump, spill containment sump, an oil/water separator, or other spill control device. The minimum spill retention time should be 15 minutes at the greater flow rate of the highest fuel dispenser nozzle through-put rate, or the peak flow rate of the 6-month, 24-hour storm event over the surface of the containment pad, whichever is greater. The capacity of the spill containment sump should be a minimum of 50 gallons with additional capacity provided for grit sedimentation.

Structural Source Control BMPs for Maintenance and Repair of Vehicles and Equipment:

- Conduct all maintenance and repair of vehicles and equipment in a building, or other covered impervious containment area that is sloped to prevent run-on of uncontaminated stormwater and runoff of contaminated stormwater.
- Park large mobile equipment in a designated contained area.
- The Structural Source Control BMPs for the following are also required: Fueling at Dedicated Stations; Loading and Unloading Areas for Liquid or Solid Material; Storage of Liquids in Permanent Above-Ground Tanks; Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products; Spills of Oil and Hazardous Substances.

Structural Source Control BMPs for Painting/Finishing/ Coating of Vehicles/Boats/ Buildings/ Equipment:

- Enclose and/or contain all work while using a spray gun or conducting sand blasting and in compliance with applicable air pollution control, Occupational Safety and Health Administration (OSHA), and Washington Industrial Safety and Health Act (WISHA) requirements.
- Do not conduct outside spraying, grit blasting, or sanding activities during windy conditions that render containment ineffective.

Structural Source Control BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers:

These BMPs are addressed in the Avista Hazardous Waste Management Plan.

- Keep containers with Dangerous Waste, food waste, or other potential pollutant liquids inside a building unless this is impracticable due to site constraints or Uniform Fire Code requirements.
- Store containers in a designated area, which is covered, bermed or diked, paved and impervious in order to contain leaks and spills. The secondary containment shall be sloped to drain into a dead-end sump for the collection of leaks and small spills.
- For liquid wastes, surround the containers with a dike. The dike must be of sufficient height to provide a volume of either 10 percent of the total enclosed container volume or 110 percent of the volume contained in the largest container, whichever is greater, or, if a single container, 110 percent of the volume of that container.

- Where material is temporarily stored in drums, a containment system can be used, in lieu of the above system.
- Place containers mounted for direct removal of a liquid chemical for use by employees inside a containment area as described above. Use a drip pan during liquid transfer.

Structural Source Control BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products:

- Pave the area and install a drainage system. Place curbs or berms along the perimeter of the area to prevent the run-on of uncontaminated stormwater and to collect and convey runoff to treatment. Slope the paved area in a manner that minimizes the contact between stormwater (e.g., pooling) and leachable materials in compost, logs, bark, wood chips, etc.

For large uncovered stockpiles, implement containment practices at the perimeter of the site and at any catch basins as needed to prevent erosion and discharge of the stockpiled material off-site or to a storm drain. Ensure that no direct discharge of contaminated stormwater to catch basins exists without conveying runoff through an appropriate runoff treatment BMP.

Structural Source Control BMPs for Washing and Steam Cleaning Vehicles/ Equipment/ Building Structures:

Conduct vehicle/equipment washing in one of the following locations:

- At a commercial washing facility in which the washing occurs in an enclosure and drains to the sanitary sewer.
- In a building constructed specifically for washing of vehicles and equipment, which drains to a sanitary sewer.

Conduct outside washing operation in a designated wash area with the following features:

- In a paved area, construct a spill containment pad to prevent the run-on of stormwater from adjacent areas. Slope the spill containment area to collect washwater in a containment pad.
- drain system with perimeter drains, trench drains, or catchment drains. Size the containment pad to extend out a minimum of 4 feet on all sides of the washed vehicles and/or equipment.
- Convey the washwater to a sump (like a grit separator) and then to a sanitary sewer (if allowed by the local sewer authority), or other appropriate wastewater treatment or recycle system. The containment sump must have a positive control outlet valve for spill control with live containment volume and oil and water separation. Size the minimum live storage volume to contain the maximum expected daily washwater flow plus the sludge storage volume below the outlet pipe. Shut the outlet valve during the washing cycle to collect the washwater in the sump. The valve should remain shut for ≥ 2 hours following the washing operation to allow the oil and solids to separate before discharge to a sanitary sewer.
- Close the inlet valve in the discharge pipe when washing is not occurring, thereby preventing the entry of uncontaminated stormwater into the pretreatment/treatment system. The stormwater can then drain into the conveyance/discharge system outside of the wash pad (essentially bypassing the sanitary sewer or recycle system). Post signs to inform people of the operation and purpose of the valve. Clean the concrete pad thoroughly until there is no foam or visible sheen in the

washwater prior to closing the inlet valve and allowing uncontaminated stormwater to overflow and drain off the pad (see Figure 8.16: Uncovered Wash Area).

Note: The purpose of the valve is to convey only washwater and contaminated stormwater to a treatment system.

- Collect the washwater from building structures and convey it to appropriate treatment, such as a sanitary sewer system if it contains oils, soaps, or detergents. If the washwater does not contain oils, soaps, or detergents (in this case only a low-pressure, clean, cold water rinse is allowed) then it could drain to soils that have sufficient natural attenuation capacity for dust and sediment.
- Sweep surfaces prior to cleaning/washing to remove excess sediment and other pollutants.
- If roof equipment or hood vents are cleaned, ensure that no washwater or process water is discharged to the roof drains or drainage systems.
- Label all mobile cleaning equipment as follows: “Properly dispose of all wastewater. Do not discharge to an inlet/catch basin, ditch, stream, or on the ground.”

3.3. Treatment BMPs

Instructions: The previously listed operational and structural source control BMPs are designed to prevent the contact of stormwater with pollutants. Contamination of stormwater can still occur in spite of source control BMPs. Develop a list of treatment BMPs to address this residual pollution, including the Mandatory BMPs in the Permit, and “Applicable BMPs” from the Stormwater Management Manuals. Include any existing stormwater controls at the site (e.g., oil/water separators, vaults, catch basins, swales, etc.) and discuss their effectiveness at reducing contamination of discharges.

Treatment BMPs include all BMPs that are intended to remove pollutants from stormwater. Some treatment BMPs only address certain pollutant types (e.g., sediment, petroleum hydrocarbons, metals, etc.); some address combinations of pollutant types. Examples of treatment BMPs include, but are not limited to:

- Detention or retention basins and vaults
- Oil/water separators
- Infiltration basins or trenches
- Bio-filtration (or Bio-infiltration) swales
- Media (e.g. compost, etc.) filters, including downspout media filters and catch basin media filters
- Sand Filters
- Advanced chemical treatment structures including chitosan enhanced sand filtration systems, and electro-coagulation systems (need prior approval by Ecology).

For each treatment BMP or structure at your facility, fill out a copy of the following table with the appropriate information (cut/paste additional tables, if necessary). Additional treatment BMPs added over time (e.g., Level 3 corrective actions) need to be included in this section.

Structure: Oil Separator #1
Date of Implementation: 1983
Discharge Point: SW-North
Area(s) Treated: North half of facility
Pollutants Removed: Oil

Maintenance Requirement(s): Cleanout of structure and waste oil tank
Frequency: Annually

Structure: Oil Separator #2
Date of Implementation: 1983
Discharge Point: SW-South
Area(s) Treated: South half of facility
Pollutants Removed: Oil

Maintenance Requirement(s): Cleanout of structure and waste oil tank
Frequency: Annually

Mandatory Treatment BMPs Required by Condition S9. of the NPDES Waste Discharge Permit No. WA0045217 (See Condition S9.B.4.b.iii of the permit (Page 29-30) for more information):

- Use Treatment BMPs consistent with the applicable documents referenced in Permit Condition S9.A.3.
- Employ oil/water separators, booms, skimmers or other methods to eliminate or minimize oil and grease contamination of stormwater discharges.
  - Many "off the shelf" oil removal BMPs are available (Absorptive booms, skimmers, pads, etc.)
  - If an oil/water separator needs to be designed and installed, refer to:
    - 2019 Stormwater Management Manual for Eastern WA (Chapter 5.10) http://www.ecy.wa.gov/pubs/0410076.pdf
- Obtain Ecology approval before beginning construction/installation of all treatment BMPs that include the addition of chemicals to provide treatment (e.g., polymer enhanced sand-filter systems, electro-coagulation systems, etc.)

Applicable Treatment BMPs from Ecology's 2019 Stormwater Management Manual for Eastern Washington

Treatment BMPs for Maintenance and Repair of Vehicles and Equipment:

Convey contaminated stormwater runoff from vehicle staging and maintenance areas to a sanitary sewer, if allowed by the local sewer authority, or to an American Petroleum Institute or coalescing plate oil and water separator followed by a basic treatment BMP, applicable filter, or other equivalent oil treatment system.

Treatment BMPs for Storage of Vehicles and Equipment:

- The KFGS facility is not a high use site. Oil control BMPs are in use at the facility.

Treatment BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers:

- For contaminated stormwater in the containment area, connect the sump outlet to a sanitary sewer, if approved by the local sewer authority, or to appropriate treatment, such as an American Petroleum Institute or coalescing plate oil and water separator or other appropriate system (see Chapter 5 - Runoff Treatment BMP Design). Equip the sump outlet with a normally closed valve to prevent the release of spilled or leaked liquids, especially flammables (compliance with fire codes), and dangerous liquids. Open this valve only for the conveyance of contaminated stormwater to treatment.
- Another option for discharge of contaminated stormwater is to pump it from a dead-end sump or catchment to a tank truck or other appropriate vehicle for off-site treatment and/or disposal.

Treatment BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products

Convey contaminated stormwater from the stockpile area to the following:

- Settling basin
- Other appropriate runoff treatment BMP depending on the contamination

3.4. Stormwater Peak Runoff Rate and Volume Control BMPs

Refer to Permit Condition (see S9.B.4.b.iv. pg. 320 of the NPDES Waste Discharge Permit No. WA0045217):

Facilities with new development or redevelopment must evaluate whether flow control BMPs are necessary to satisfy the state's AKART requirements, and prevent violations of water quality standards.

If flow control BMPs are required, they must be selected according to Permit Condition S9.A.3. Proper Selection and Use of Stormwater Management Manuals (SWMM).

Refer to Permit Condition (see S9.B.4.b.vv. pg. 30 of the NPDES Waste Discharge Permit No. WA0045217):

1) The SWPPP must describe the erosion and sediment control BMPs necessary to prevent the erosion of soils and other earthen materials (crushed rock/gravel, etc.) and prevent off-site sedimentation and violations of water quality standards. The Permittee must implement and maintain: Sediment control BMPs such as detention or retention ponds or traps, vegetated filter strips, bioswales, or other permanent sediment control BMPs (vegetated ditches) to minimize sediment loads in stormwater discharges.
2) Filtration BMPs to remove solids from catch basins, sumps or other stormwater collection and conveyance system components (filter socks, modular canisters, sand filtration, centrifugal separators, etc.).

Definition: Erosion and Sediment Control BMPs means BMPs that are intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, and sediment traps and ponds.

Instructions: Develop a list of BMPs used to prevent the erosion of earthen materials (soil, sand, gravel, etc.) that can cause off-site sedimentation and turbidity. Include any existing BMPs at the site and discuss their effectiveness at reducing contamination erosion and sediment. Typical practices include:

- Areas that are not paved are covered with landscaping or well maintained vegetation that prevents soil erosion.
- Runoff is routed to a detention or retention basin
- Catch basin inserts (filter socks) are installed in catch basin
- Impervious areas are not curbed to promote sheet flow onto vegetated areas
- A bioswale, sandfilter or other treatment structures is used to treat runoff.

For each treatment BMP or structure at your facility, fill out a copy of the following table with the appropriate information (cut/paste additional tables, if necessary).

Erosion and Sediment Control BMPs

1) Unpaved slopes are vegetated and maintained to prevent erosion
2) Paved areas are not curbed to allow sheet flow to vegetated areas
3) Paved and unpaved areas are surrounded by unlined ditches with high infiltration soils that slow flow and help control sediment migration
4) All of the above BMPs are maintained on an as-needed basis (determined by periodic inspection) and at least annually in early fall.

Section 4. Stormwater Observation Plan

1) **Discharge Location(s).** Identify all points of *discharge* to surface water, *storm sewers*, or discrete *ground water* infiltration locations, such as dry wells or *detention* ponds. Or use Table below.

Discharge ID	Common description	Latitude (optional)	Longitude (optional)	Discharge Type	Comments
SW-N (North)	Outfall at northwest corner of Switchyard (outside edge of access road).			Overland (surface water)	
SW-S (South)	Outfall north of oil/water separator west of retention basin.			Overland (surface water)	

2) Identify each sampling location by its unique identifying number such as A1, A2, etc. Include these sampling locations on site map. or use Table Below

   Note: When identifying sampling locations, follow these permit conditions:
   - The Permittee shall designate sampling location(s) at the point(s) where it discharges *stormwater* associated with *industrial activity* off-site.
   - The Permittee is not required to sample on-site discharges to ground (e.g., infiltration, etc.) or *sanitary sewer* discharges, unless specifically required by *Ecology* (Condition G12).

Discharge ID	Common description	Latitude (optional)	Longitude (optional)	Discharge Type	Comments
SW-N (North)	Outfall at northwest corner of Switchyard (outside edge of access road).			Overland (surface water)	Discharge from Oil Separator 1
SW-S (South)	Outfall north of oil/water separator west of retention basin.			Overland (surface water)	Discharge from Oil Separator 2

3) **Substantially identical outfall exception** (if applicable)

   NOT APPLICABLE

4) **Staff Responsible for Stormwater Observations.** Identify the staff responsible for conducting *stormwater* observations.

   The facility Environmental Scientist is responsible for conducting stormwater observations.

5) **Stormwater Observations.** Specify the procedures for stormwater observations.

Monthly observations of stormwater discharge from SW-N and SW-S will be observed from the respective outfalls as they discharge. Observations will be made for the presence of floating materials, visible oil sheen, discoloration, **turbidity**, odor, etc. in the **stormwater** discharge(s).

When observing the stormwater for evidence of oil sheen the point of observation should be prior to entering the discharge culvert. Due to pipe configuration this is not possible at KFGS and so all visual observations will be at discharge from culvert.

6) **Submitting Observations Results to Ecology.**

- The observation data obtained during each reporting period will be kept on file at the facility and at Avista's corporate headquarters. Copies of sampling data results will be submitted to *Ecology* upon request. Sampling data obtained during previous sampling events will be kept for a minimum of 3 years.
- Observation results will be submitted by mail to the following address upon request:

  Mr. Pat Hallinan
  Water Quality Program
  Department of Ecology
  Eastern Regional Office
  4601 North Monroe Street
  Spokane, Washington 99205-1295

- If discharge(s) occurred during normal working hours, and during safe conditions; but no observation was made during the entire monthly period, the SWPPP inspection form will indicate "no observations made" and will be kept on file. If no discharge(s) occurred during the entire monthly period or the discharges during the monthly period occurred outside normal working hours or during unsafe conditions, an observationform indicating "no discharge" will be completed and kept on file.

Section 5. SWPPP Certification

Instructions:

- A SWPPP certification form needs to be completed and attached to all SWPPPs.
- Sign and certify that the Stormwater Pollution Prevention Plan (SWPPP) is complete, accurate and in compliance with Conditions S9 and S10 of the NPDES Permit.
  - The Permittee must sign and certify all SWPPPs in accordance with General Condition G1, each time it revises or modifies a SWPPP to comply with Condition S9.A.4 (Update of the SWPPP).

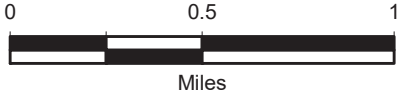
See Appendix D.

SWPPP Appendices

Attach the following documentation to the SWPPP:

Appendix A – General Location Map
Appendix B – Site Map
Appendix C –Worksheets for Development of the SWPPP
Appendix D – SWPPP Certification or Recertification Form (for Level 1, 2, or 3 Corrective Action(s))
Appendix E – BMPs Applicable to the Kettle Falls Generating Station
Appendix F –Stormwater Monthly Inspection Report

Appendix A – General Location Map



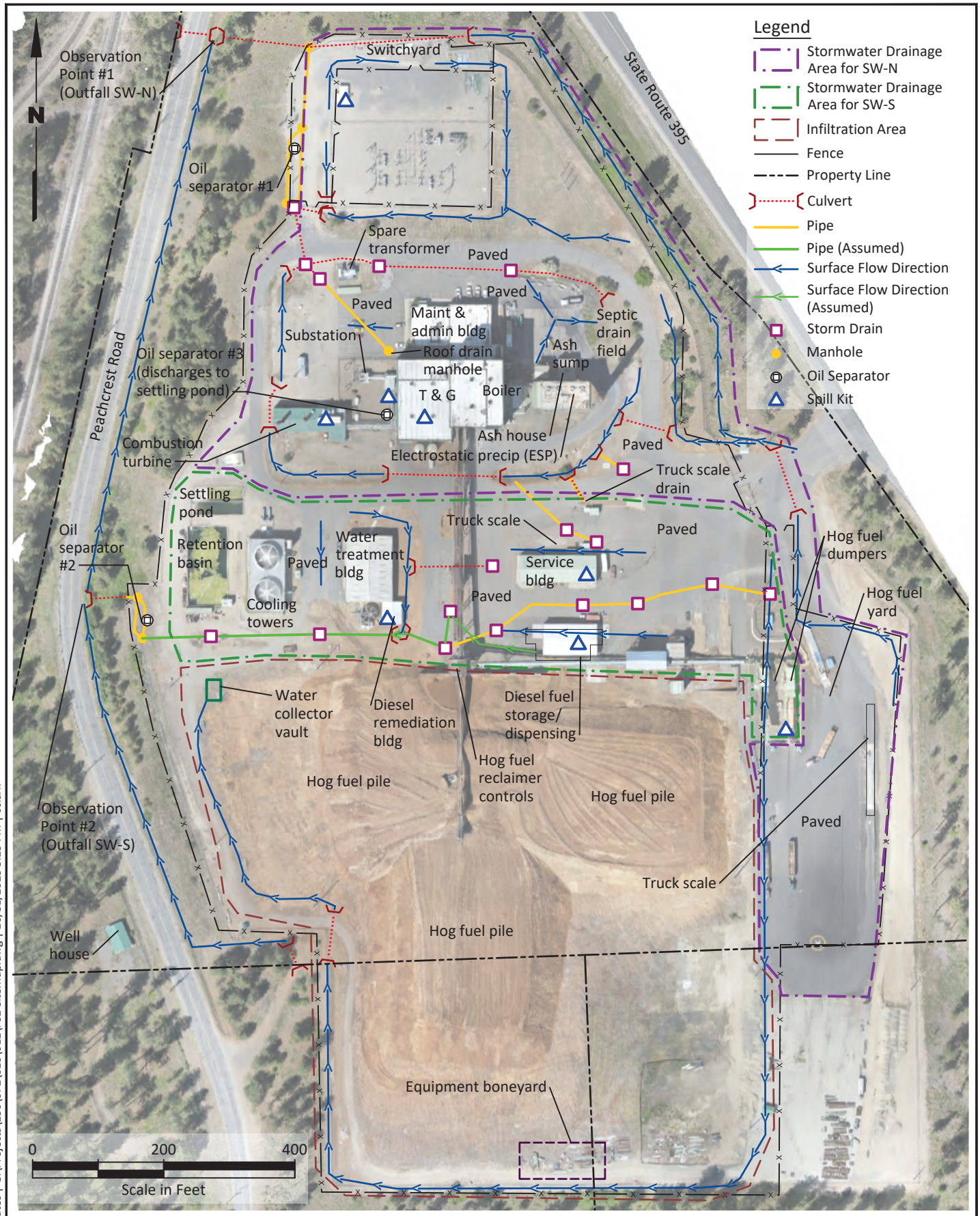
Data Source: Esri 2012

G:\Projects\236\072\010\012\F01GeneralLocationMap.mxd 8/20/2023 NAD 1983 StatePlane Washington North FIPS 4601 Feet

LANDAU ASSOCIATES

Kettle Falls Generating Station Avista Utilities Kettle Falls, Washington	**General Location Map**	Figure 1

Appendix B – Site Map



Source: Hydrometrics, Inc. 2014. Drone Imagery provided by Avista.

Map Date: 08/21/2023

Landau Associates | G:\Projects\236\072\010\012\F02 SiteMap.dwg | 10/31/2023 5:23 PM | cclark

LANDAU ASSOCIATES

Kettle Falls Generating Station Avista Utilities Kettle Falls, Washington	**Site Map**	Figure 2

Appendix C. Blank Worksheets for Development of the SWPPP

Note: Use these forms or create your own.

Pollution Prevention Team	Worksheet #1 Completed by: Josh LaPorte Title: Environmental Scientist Date: November 2021

Responsible Official: Patrick Lutskas Title: Plant Manager

Team Leader: Josh LaPorte Office Phone:(509) 738-1510

Responsibilities:
Inspections, sampling, reporting, and training

(1) Patrick Lutskas Title: Plant Manager

Office phone (509) 738-1523 Cell phone (509) 595-0392

Responsibilities:
Planner for Electrical and Mechanical Maintenance at Kettle Falls Generating Station.

(2) LaDonna Jensen Title: Plant Materials Person

Office phone (509) 738-4431

Responsibilities:
Procurement of materials and supplies to support BMP installation and maintenance.

Material Inventory	Worksheet #2 Completed by: Antonio Chavez Title: Consultant (Hydrometrics, Inc.) Date: July 2014

List materials handled, treated, stored, or disposed of at the site that may potentially be exposed to precipitation or runoff. Also indicate if any spills or leaks of pollutants have occurred in the past. (Including any pollutants no longer handled on-site.)

Material	Purpose/ Location	Quantity (Units)			Exposed Since Nov. 89 (Yes/No)	Likelihood of contact with stormwater If Yes, describe reason	Past Spill or Leak	
		Used	Produced	Stored			Yes	No.
		(indicate per/wk. or yr.)						
Wood chips/ fines	Fuel/ Outside storage	500k tons	NA	125 k tons	Yes	Contact with stormwater likely due to outside storage.		NA
Diesel fuel	Mobile equip/East of fuel yard		NA	32 k gallons	No	Unlikely, only if spills occur during fueling outside of diesel storage building at same time as precipitation is occurring.	Y	
Transformer cooling oil	Oil filled equip/ switchyard & sub		NA	8.3 k gallons	Yes	Contact likely if spill occurs due to outside storage.		N
Lube/hyd oil	Fuel dumpers/ reclaimers		NA	1390 gallons	Yes	Contact likely if spill occurs due to outside storage		N
Sulfuric acid	Water treatment		NA	7300 gallons	No	Unlikely, only if spills occur during unloading at same time as precipitation is occurring.		N
Caustic	Water treatment		NA	100 gallons	No	Unlikely, only if spills occur during unloading at same time as precipitation is occurring.		N

Description of Exposed Significant Material	Worksheet #2A Completed by: Antonio Chavez Title: Consultant (Hydrometrics, Inc.) Date: July 2014

Based on your material inventory, list significant materials that have been exposed since November 18, 1989, and/or are currently exposed.

List of Exposed Significant Materials	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of storage, handling, treatment, or disposal (e.g., sealed drum standing outside, or covered pile, drum, tank)
Hog Fuel	24/7	125 k tons	Fuel yard	Uncovered piles

Potential Pollutant Source Identification	Worksheet #3 Completed by: Antonio Chavez Title: Consultant (Hydrometrics, Inc.) Date: July 2014	
List all potential stormwater pollutants from materials handled, treated, or stored on-site.		
Potential Stormwater Pollutant	Stormwater Pollutant Source	Likelihood of pollutant being present in your stormwater discharge. If yes, explain
Wood chips & fines	Storage and handling areas	Some potential due to wind
Diesel fuel	Aboveground storage tanks	Low potential
Transformer cooling oil	Switchyard and facility substation	Low potential
Lube/hydraulic oil	Fuel Reclaimers and Truck dumpers	Low potential

List of Significant Spills and Leaks	Worksheet #4 Completed by: Antonio Chavez Title: Consultant, (Hydrometrics, Inc.) Date: July 2014

List all spills and leaks (as indicated on Worksheet #2) of toxic or hazardous pollutants that were significant. Significant spills and leaks include but are not limited to, release of oil or hazardous substances in excess of reportable quantities (see chapter 2 of text). Although not required, we suggest you list spills and leaks of non-hazardous materials.

Date (month/day/year)	Location (as indicated on site map)	Description				Response Procedure		Preventive Measure Taken
		Type of Material	Quantity	Source, If Known	Reason for Spill/Leak	Amount of Material Recovered	Material No longer exposed to Storm-water (Yes/No)	
12/24/2013	Reclaimer	Diesel	10K gallons	Fuel line	Corrosion	In progress	None	Removed fueling station

Spill Log	Worksheet #4A_____ Completed by:_____ Title:_____ Date:_____

See Worksheet #4

Date and Time	Location	Description				Response Procedure		Comments
		Amount	Type of Material	Source, If Known	Reason for Spill/Leak	Notifications Made	Staff Involved	

Identify Areas Associated With Industrial Activity	Worksheet #5 Completed by: Antonio Chavez Title: Consultant (Hydrometrics, Inc.) Date: July 2014

List areas and activities, not included on Worksheets 2, 2A, and 3, which may be sources of pollution. Discuss the potential of these areas and activities as potential pollutant sources and identify any pollutant that may be generated by that activity...

Industrial Area or Activity	Potential Stormwater Pollutant from Area or Activity	Likelihood of being present in your stormwater discharge. If yes, describe reason.
None		

BMP Identification	Worksheet #8 Completed by: Antonio Chavez Title: Consultant (Hydrometrics, Inc.) Date: July 2014

Describe the BMPs that are needed for the facility to address existing and potential pollutant sources identified in Worksheets #3, 4, and 5.

BMPs	Brief Description of Activities or Improvements
Good Housekeeping	See Section 3
Preventive Maintenance	See Section 3
Spill Prevention and Emergency Cleanup	See Section 3

BMPs	Brief Description of Activities or Improvements
Inspections	See Section 3
Source / Operational Control BMPs	See Section 3
Erosion and Sediment Control BMPs	See Section 3

Additional BMP Identification	Worksheet #8A Completed by: Title: Date:

Describe any treatment and innovative BMPs that are required to address existing and potential pollutant sources identified in Worksheet 3, 4, and 5. These are BMPs needed to prevent the discharge of significant amounts of pollutants despite implementation of operational and source control BMPs.

BMPs	Brief Description of Activities or Improvements
Treatment BMPs	See Section 3
Emerging technologies Flow Control BMPs	None

BMP Implementation	Worksheet #9 Completed by: Antonio Chavez Title: Consultant (Hydrometrics, Inc.) Date: July 2014

Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person(s) responsible for implementation.

BMPs	Description of Action(s) Required for Implementation	Schedule Milestone and Completion Date(s)	Person Responsible for Action
Good Housekeeping	1. Review BMPs with affected department heads		
	2.Schedule implementation if not already practiced		
Preventive Maintenance	1. See Actions under Good Housekeeping		
	2.		
	3.		
	4.		
Spill Prevention and Emergency Cleanup	1. See Actions under Good Housekeeping		
	2.		
	3.		
Inspections	1. See Actions under Good Housekeeping		
	2.		
	3.		

BMPs	Description of Action(s) Required for Implementation	Schedule Milestone and Completion Date(s)	Person Responsible for Action
Source Control BMPs	1. See Actions under Good Housekeeping		
	2.		
	3		
Operational Control BMPs	4.		
	5.		
	6.		
	7.		
	8.		
Erosion and Sediment Control	1. See Actions under Good Housekeeping		
	2.		
	3.		
	4.		
Treatment BMPs	1. See Actions under Good Housekeeping		
	2.		
	3.		
	4.		

Appendix D. SWPPP Certification Form

Appendix D. SWPPP Certification Form

The Permittee shall use this form to sign and certify that the Stormwater Pollution Prevention Plan (SWPPP) is complete, accurate and in compliance with Conditions S9 and S10 of the NPDES Permit.

- The Permittee must sign and certify all SWPPPs in accordance with General Condition G1, each time it revises or modifies a SWPPP to comply with Condition S9.A.4 (Update of the SWPPP).

"I certify under penalty of law that this SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information to determine compliance with the Industrial Stormwater General Permit. Based on my inquiry of the person or persons who are responsible for stormwater management at my facility, this SWPPP is, to the best of my knowledge and belief, true, accurate, and complete, and in full compliance with Permit Conditions S3 and S8, including the correct Best Management Practices from the applicable Stormwater Management Manual. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Patrick Lutskas	KFGS Plant Manager
Operator's Printed Name *	Title
DocuSigned by: Patrick Lutskas 25101CE4BDFF42B...	Nov-28-2023 | 9:27 AM PST
Operator's Signature *	Date

* Federal regulations require this document to be signed as follows:
For a corporation, by a principal executive officer of at least the level of vice president;
For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

This document shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Ecology.
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

Changes to authorization. If an authorization under number 2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of number 2 above shall be submitted to Ecology prior to, or together with, any reports, information, or applications to be signed by an authorized representative.

Appendix E. List of Applicable Industry-Specific Source Control BMPs

2019 Stormwater Management Manual for Eastern Washington (Chapter 8) Best Management Practices (BMPs) for Industrial Activities in Washington State and Applicability to Avista Corporation, Kettle Falls Generating Station Kettle Falls, Washington

Best Management Practices (BMPs) by Industrial Activity	Applicability to this Facility	Comments
BMPs for the Building, Repair, and Maintenance of Boats and Ships	Does not apply	Kettle Falls Generating Station (KFGS) does not build, repair, or maintain boats and/or ships.
BMPs for Commercial Animal Handling Areas	Does not apply	KFGS does not handle animals.
BMPs for Commercial Composting	Does not apply	KFGS is not a composting facility.
BMPs for Commercial Printing Operations	Does not apply	KFGS is not a commercial printing facility.
BMPs for Deicing and Anti-Icing Operations for Airports	Does not apply	KFGS is not an airport.
BMPs for Deicing and Anti-Icing Operations for Streets and Highways	Does not apply	KFGS does not apply deicing materials to streets or highways.
BMPs for Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	Applies to this Facility	The Facility is partly paved. There are unpaved roadways and land areas at the Facility.
BMPs for Dust Control at Manufacturing Areas	Does not apply	No manufacturing processes that generate dust are currently ongoing at the Facility.
BMPs for Fueling at Dedicated Stations	Applies to this Facility	KFGS conducts fueling in a newly constructed fueling shed from a temporary diesel fuel tank trailer.
BMPs for Illicit Connections to Storm Drains	Applies to this Facility	KFGS has no known illicit connections to storm drains.
BMPs for Landscaping and Lawn/Vegetation Management	Applies to this Facility	KFGS maintains minimal landscaping or lawn/vegetation.
BMPs for Loading and Unloading Areas for Liquid or Solid Material	Applies to this Facility	KFGS is an active industrial facility and therefore loading and unloading operations take place at the Facility
BMPs for Log Sorting and Handling	Does not apply	KFGS does not maintain a log yard.
BMPs for Maintenance and Repair of Vehicles and Equipment	Applies to this Facility	KFGS performs maintenance of bulldozers and other equipment at the Facility.
BMPs for Maintenance of Public and Private Utility Corridors and Facilities	Applies to this Facility	KFGS maintains utility corridors at the Facility.
BMPs for Maintenance of Roadside Ditches	Applies to this Facility	The Facility maintains roadside ditches.

2019 Stormwater Management Manual for Eastern Washington (Chapter 8) Best Management Practices (BMPs) for Industrial Activities in Washington State and Applicability to Avista Corporation, Kettle Falls Generating Station Kettle Falls, Washington

Best Management Practices (BMPs) by Industrial Activity	Applicability to this Facility	Comments
BMPs for Maintenance of Drainage Systems and Runoff Treatment BMPs	Applies to this Facility	The Facility maintains two independent stormwater drainage and treatment systems (SW-North and SW-South) and collects runoff from the fuel pile and applies this water back onto the fuel storage pile.
BMPs for Manufacturing Activities – Outside	Does not apply	KFGS does not conduct any manufacturing or processing activities outside.
BMPs for Mobile Fueling of Vehicles and Heavy Equipment	Does not apply	KFGS does not conduct mobile fueling at the site.
BMPs for Painting/Finishing/Coating of Vehicles/Boats/Buildings/Equipment	Applies to this Facility	KFGS performs minimal painting, finishing or coating of vehicles, buildings or equipment at the Facility.
BMPs for Parking and Storage of Vehicles and Equipment	Applies to this Facility	KFGS maintains vehicle and equipment parking areas.
BMPs for Railroad Yards	Does not apply	KFGS does not perform maintenance of railcars.
BMPs for Recyclers and Scrap Yards	Does not apply	KFGS is not a recycling or scrap yard Facility.
BMPs for Roof/Building Drains at Manufacturing and Commercial Buildings	Does not apply	The Facility does not have manufacturing or commercial buildings.
BMPs for Soil Erosion and Sediment Control at Industrial Sites	Applies to this Facility	The Facility is an industrial site.
BMPs for Spills of Oil and Hazardous Substances	Applies to this Facility	KFGS has a diesel fuel tank trailer and stores water treatment chemicals. BMPs are met by implementation of the SPCC Plan.
BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Applies to this Facility	BMPs are addressed in the Avista Hazardous Waste Management Plan.
BMPs for Storage of Liquids in Permanent Aboveground Tanks	Does not apply	KFGS does not currently store liquids in permanent aboveground tanks outdoors.
BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-products, or Finished Products	Applies to this Facility	KFGS accepts wood waste as fuel delivered by truck and stored at the facility wood waste fuel pile.
BMPs for Urban Streets	Does not apply	Urban streets are outside of the KFGS property.
BMPs for Washing and Steam Cleaning Vehicles/Equipment/Building Structures	Applies to this Facility	KFGS occasionally performs washing of vehicles and equipment outside the Maintenance Shop.

2019 Stormwater Management Manual for Eastern Washington (Chapter 8) Best Management Practices (BMPs) for Industrial Activities in Washington State and Applicability to Avista Corporation, Kettle Falls Generating Station Kettle Falls, Washington

Best Management Practices (BMPs) by Industrial Activity	Applicability to this Facility	Comments
BMPs for Wood Treatment Areas	Does not apply	KFGS does not perform wood treatment.
BMPs for Pools, Spas, Hot Tubs, and Fountains	Does not apply	KFGS does not operate any of these features at the Facility.
BMPs for Dock Washing	Does not apply	KFGS does not conduct dock washing.
BMPs for Pesticides and an Integrated Pest Management Program	Applies to this Facility	KFGS contracts pest control services to a licensed pest control contractor.
BMPs for Color Events	Does not apply	KFGS does not conduct color events.
BMPs for Construction Demolition	Does not apply	KFGS does not conduct construction demolition activities at the Facility.
BMPs for In-Water and Over-Water Fueling	Does not apply	KFGS does not conduct in-water or over-water fueling.
BMPs for Pet Waste	Does not apply	KFGS does not have outdoor pet areas.
BMPs for Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	Some BMPs apply	KFGS occasionally conducts hydrant testing.
BMPs for Labeling Storm Drain Inlets	Applies to this Facility	KFGS maintains several storm drain inlets.
BMPs for Fertilizer Application	Does not apply	KFGS does not apply fertilizer to the site.
BMPs for the Storage of Dry Pesticides and Fertilizers	Does not apply	KFGS does not store dry pesticides or fertilizers.
BMPs for Temporary Fruit Storage	Does not apply	KFGS does not temporarily store fruit.
BMPs for Well, Utility, Directional, and Geotechnical Drilling	Does not apply	KFGS does not conduct well, utility, directional or geotechnical drilling.
BMPs for Roof Vents	Does not apply	No roof vents are used at the Facility (See Section 2.1.1)
BMPs for Nurseries and Greenhouses	Does not apply	KFGS is not a commercial container plant, greenhouse grown, or cut foliage production facility.

2019 Stormwater Management Manual for Eastern Washington (Chapter 8) Best Management Practices (BMPs) for Industrial Activities in Washington State and Applicability to Avista Corporation, Kettle Falls Generating Station Kettle Falls, Washington

Best Management Practices (BMPs) by Industrial Activity	Applicability to this Facility	Comments
BMPs for Irrigation	Does not apply	KFGS does not irrigate the site.
BMPs for Building, Repair, Remodeling, Painting and Construction	Does not apply	KFGS does not construct new buildings, remodel existing buildings, or conduct general exterior building repair work.
BMPs for Goose Waste	Does not apply	The Facility does not attract geese.

Appendix F. Industrial Stormwater Monthly Inspection Report

Stormwater Monthly Inspection Report

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by this permit. Retain a copy of the completed and signed form in accordance with Permit Condition S10.C.

FACILITY NAME:	**INSPECTION TIME:** **DATE:**

WEATHER INFORMATION:

- Description of Weather Conditions (e.g., sunny, cloudy, raining, snowing, etc.):

  _____

- Was stormwater (e.g., runoff from rain or snowmelt) flowing at outfalls and/or discharge areas shown on the Site Map during the inspection: ☐ **Yes** ☐ **No** ☐ **Comments:**

  _____

I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BEST MANAGEMENT PRACTICES EVALUATION

SWPPP and Site Map	**Yes**	**No**	**N/A**	**Findings and Remedial Action Documentation**
Is the Site Map current and accurate?				
Is the SWPPP inventory of activities, materials and products current?				
Are the descriptions of potential pollutant sources required under this Permit accurate?				
Vehicle/Equipment Areas				
Equipment fueling: Check N/A if not performed on-site. Skip section.	**Yes**	**No**	**N/A**	**Findings and Remedial Action Documentation**
Are all fueling areas free of contaminant buildup and evidence of chronic leaks/spills?				
Are storm drains that receive runoff from areas where fueling occurs able to be blocked, plugged or covered?				
Are drip pans or equivalent containment measures used during all petroleum transfer operations?				

Equipment Maintenance	Yes	No	N/A	Findings and Remedial Action Documentation
Are maintenance tools, equipment, and materials properly stored?				
Are all drums and containers of fluids stored with proper cover and containment?				
Are any vehicles and/or equipment leaking fluids such as oil, antifreeze, etc.? Identify leaking equipment. If so, take leaking equipment out of service or prevent leaks from spilling on the ground until repaired.				
Is there evidence of leaks or spills since last inspection? Identify and clean up spills and leaks (e.g., using absorbents, vacuuming, etc.) to prevent discharge of pollutants.				
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?				
Add any additional site-specific BMPs: _____ _____ _____ _____ _____				

I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BEST MANAGEMENT PRACTICES EVALUATION

Good Housekeeping BMPs	Yes	No	N/A	Findings and Remedial Action Documentation
1. Are paved surfaces free of accumulated dust/sediment and debris?				
Has the site been vacuumed/swept this quarter?				
2. Are there areas of erosion or sediment/dust sources that discharge to storm drains?				
3. Are all waste receptacles located outdoors free of leaks and in good condition?				
4. Are the following areas free of accumulated dust/sediment, debris, contaminants, and/or spills/leaks of fluids?	**Yes**	**No**	**N/A**	**Findings and Remedial Action Documentation**
Pallet, bin, and drum storage areas				
Equipment staging areas (loaders, tractors, trailers, forklifts, etc.)				
Around ash house				
Around air pollution control equipment				
Around bone yards				
Other areas of industrial activity: _____ _____				

Spill Response and Equipment	Yes	No	N/A	Findings and Remedial Action Documentation
Are spill kits available, at:				
Fueling stations				
Vehicle and equipment maintenance areas				
Are all chemicals and petroleum products stored properly in containment?				
Are structures in place to prevent precipitation from accumulating in containment areas?				
Do the spill kits contain all the permit required items?				
Oil absorbents capable of absorbing 15 gallons of fuel or potential fuel spills.				
A storm drain plug or cover kit.				
A non-water containment boom.				
Spill cleanup containers with minimum ten gallons capacity.				
Are contaminated absorbent materials properly disposed of?				
I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BEST MANAGEMENT PRACTICES EVALUATION				
General Material Storage Areas	**Yes**	**No**	**N/A**	**Findings and Remedial Action Documentation**
Are damaged materials stored inside a building or another type of storm resistance shelter?				
Are all uncontained material piles stored in a manner that does not allow discharge of impacted stormwater?				
Are dumpsters covered?				
Stormwater BMPs and Treatment Structures	**Yes**	**No**	**N/A**	**Findings and Remedial Action Documentation**
Are BMPs and treatment structures in good repair and operational?				
Are BMPs and treatment structures free from debris buildup that may impair function?				
Are the depth of catch basins less than 6 in. below the outlet pipe or is the depth of debris in the catch basins greater than 60% of the sump depth?				
Are berms, curbing and swales in good condition?				

Observation of Stormwater Discharges	Yes	No	N/A	Findings and Remedial Action Documentation
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?				
Is process or wash water comingling with stormwater or entering storm drains?				
Were any illicit discharges observed during the inspection?				

II. CORRECTIVE ACTION AND SWPPP MODIFICATIONS DESCRIPTIONS: Additional space to describe inspection findings and corrective actions if needed. Provide brief explanation of the general location and the rationale for the additional or different BMPs.

III. CERTIFICATION STATEMENTS AND SIGNATURES

Inspector - Certification: This section must be completed by the person who conducted the site inspection prior to submitting this form to the person with signature authority (see Permit Condition G2) or a duly authorized representative of that person.

☐ The facility is in compliance with the terms and conditions of the SWPPP and the NPDES Permit.

☐ *The facility is out of compliance with the terms and conditions of the SWPPP and the Industrial Stormwater General Permit. This report includes the remedial actions that must be taken to meet the requirements of the SWPPP and permit, including a schedule of implementation of the remedial actions.*

"I certify that this report is true, accurate, and complete, to the best of my knowledge and belief."

Inspector's Name – Printed	**Inspector's Signature**	**Inspector's Title**	**Date**

Permittee – Certification

☐ The facility is in compliance with the terms and conditions of the SWPPP and the NPDES Permit.

☐ *The facility is out of compliance with the terms and conditions of the SWPPP and the Industrial Stormwater General Permit. This report includes the remedial actions that must be taken to meet the requirements of the SWPPP and permit, including a schedule of implementation of the remedial actions.*

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PRINTED NAME of person with **Signature Authority** (permit condition G2.A) or a **Duly Authorized Representative**[1]	SIGNATURE of person with **Signature Authority** (permit condition G2.A) or a **Duly Authorized Representative**[1]	**DATE**

[1]A person is duly authorized representative only if 1) the authorization is made in writing by a person described in Permit Condition G2.A and submitted to Ecology, and 2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated *facility*, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

United States
Environmental Protection Agency

Office of Water
Washington, D.C.

EPA Form 3510-2F
Revised March 2019

Water Permits Division

Application Form 2F

Stormwater Discharges Associated with Industrial Activity

NPDES Permitting Program

Note: Complete this form ***and*** Form 1 if you are a new or existing facility whose discharge is composed entirely of stormwater associated with industrial activity, excluding discharges from construction activity under 40 CFR 122.26(b)(14)(x) or (b)(15). If your discharge is composed of stormwater *and* non-stormwater, you must complete Forms 1 and 2F, *and* you must complete Form 2C, 2D, or 2E, as appropriate. See the "Instructions" inside for further details.

EPA Identification Number	NPDES Permit Number	Facility Name
110008226712	WA0045217	Kettle Falls Generating Station

Form Approved 03/05/19
OMB No. 2040-0004

Form 2F NPDES

EPA

U.S Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below

Outfall Number	Receiving Water Name	Latitude	Longitude
SW- South	Lake Roosevelt, Columbia River	48° 37′ 16.47″ N	118° 06′ 44.44″ W
SW- North	Lake Roosevelt, Columbia River	48° 37′ 10.22″ N	118° 06′ 47.59″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

SECTION 2. IMPROVEMENTS (40 CFR 122.21(g)(6))

Improvements

2.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No ➔ SKIP to Section 3.

2.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall numbers)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

2.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (Optional Item)

☐ Yes ☐ No

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(c)(1)(i)(A))

Site Drainage Map

3.1 Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)

☑ Yes ☐ No

SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(c)(1)(i)(B))

Pollutant Sources

4.1 Provide information on the facility's pollutant sources in the table below.

Outfall Number	Impervious Surface Area (within a mile radius of the facility)		Total Surface Area Drained (within a mile radius of the facility)	
SW - South	135,507	*specify units* square-feet	242,000	*specify units* square-feet
SW - North	425,000	*specify units* square-feet	551,000	*specify units* square-feet
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*

4.2 Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)

The only significant material loading is hog fuel ash, which is collected in a covered building and trucked to the landfill. No material is stored outside of the structures. Waste Hog Fuel arrives at the site in trucks from sawmills located within a 200-mile radius of the plant. Receiving equipment weighs and unloads the trucks into a receiving hopper. A conveyor belt, equipped with a self-cleaning magnet and metal detector, transfers the fuel to a disc screen/wood hog for size sorting and reducing. For the Hog fuel pile, the facility collects all runoff and applies this water back onto the fuel storage pile.

The facility operates under a spill control plan and stormwater pollution prevention plan.

Materials management practices being employed include the following:
-Keeping all dumpsters covered or fit with a lid that must remain closed when not in use.
-Vacuuming paved surfaces with a vacuum sweeper (or a sweeper with a vacuum attachment) to remove accumulated pollutants once per quarter.
-Identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation.

4.3 Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)

Stormwater Treatment		
Outfall Number	Control Measures and Treatment	Codes from Exhibit 2F–1 (list)
both	Oil-water Separator - cleaned as needed and solids disposed of at approved landfill	1-H, 1-U
both	Landfill - soilds removed from OWS and disposed of at approved landfill	5-Q
both	Visual inspections	NA
both	Spill prevention plans - see SWPPP and spill control plan (attached)	NA
both	Employee training	NA
both	Preventative maintenance & housekeeping measures	NA

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(c)(1)(i)(C))

Non-Stormwater Discharges

5.1 *I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges. Moreover, I certify that the outfalls identified as having non-stormwater discharges are described in either an accompanying NPDES Form 2C, 2D, or 2E application.*

Name (print or type first and last name)	Official title
Jason Thackston	SVP, Chief Strategy and Clean Energy Offic
Signature: DocuSigned by: Jason Thackston EC91BFF9033645C...	Date signed: Nov-27-2023 | 3:31 PM PST

5.2 Provide the testing information requested in the table below.

Outfall Number	Description of Testing Method Used	Date(s) of Testing	Onsite Drainage Points Directly Observed During Test
SW - South	Visual observations performed in accordance with NPDES Permit No. WA0045217, Section 10A	monthly	Yes
SW - North	Visual observations performed in accordance with NPDES Permit No. WA0045217, Section 10A	monthly	Yes

SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(c)(1)(i)(D))

Significant Leaks or Spills

6.1 Describe any significant leaks or spills of toxic or hazardous pollutants in the last three years.

None in the last 3 years.

SECTION 7. DISCHARGE INFORMATION (40 CFR 122.26(c)(1)(i)(E))

Discharge Information

See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.

7.1 Is this a new source or new discharge?

☐ Yes ➔ See instructions regarding submission of *estimated* data.

☑ No ➔ See instructions regarding submission of *actual* data.

Tables A, B, C, and D

7.2 Have you completed Table A for each outfall?

☑ Yes ☐ No

Discharge Information Continued

7.3	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater? ☐ Yes ☑ No ➔ SKIP to Item 7.5.
7.4	Have you completed Table B by providing quantitative data for those pollutants that are (1) limited either directly or indirectly in an ELG and/or (2) subject to effluent limitations in an NPDES permit for the facility's process wastewater? ☐ Yes ☐ No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F–2 are present in the discharge? ☑ Yes ☐ No ➔ SKIP to Item 7.7.
7.6	Have you listed all pollutants in Exhibit 2F–2 that you know or have reason to believe are present in the discharge and provided quantitative data or an explanation for those pollutants in Table C? ☑ Yes ☐ No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions? ☐ Yes ➔SKIP to Item 7.18. ☑ No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F–3 are present in the discharge? ☑ Yes ☐ No ➔ SKIP to Item 7.10.
7.9	Have you listed all pollutants in Exhibit 2F–3 that you know or have reason to believe are present in the discharge in Table C? ☑ Yes ☐ No
7.10	Do you expect any of the pollutants in Exhibit 2F–3 to be discharged in concentrations of 10 ppb or greater? ☑ Yes ☐ No ➔ SKIP to Item 7.12.
7.11	Have you provided quantitative data in Table C for those pollutants in Exhibit 2F–3 that you expect to be discharged in concentrations of 10 ppb or greater? ☑ Yes ☐ No
7.12	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater? ☐ Yes ☑ No ➔ SKIP to Item 7.14.
7.13	Have you provided quantitative data in Table C for the pollutants identified in Item 7.12 that you expect to be discharged in concentrations of 100 ppb or greater? ☐ Yes ☐ No
7.14	Have you provided quantitative data or an explanation in Table C for pollutants you expect to be present in the discharge at concentrations less than 10 ppb (or less than 100 ppb for the pollutants identified in Item 7.12)? ☑ Yes ☐ No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F–4 are present in the discharge? ☐ Yes ☑ No ➔ SKIP to Item 7.17.
7.16	Have you listed pollutants in Exhibit 2F–4 that you know or believe to be present in the discharge and provided an explanation in Table C? ☐ Yes ☐ No
7.17	Have you provided information for the storm event(s) sampled in Table D? ☑ Yes ☐ No

Discharge Information Continued

Used or Manufactured Toxics

7.18	Is any pollutant listed on Exhibits 2F–2 through 2F–4 a substance or a component of a substance used or manufactured as an intermediate or final product or byproduct? ☐ Yes ☑ No ➔ SKIP to Section 8.
7.19	List the pollutants below, including TCDD if applicable. 1. 4. 7. 2. 5. 8. 3. 6. 9.

SECTION 8. BIOLOGICAL TOXICITY TESTING DATA (40 CFR 122.21(g)(11))

Biological Toxicity Testing Data

8.1	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last three years? ☐ Yes ☑ No ➔ SKIP to Section 9.

8.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

SECTION 9. CONTRACT ANALYSIS INFORMATION (40 CFR 122.21(g)(12))

Contract Analysis Information

9.1	Were any of the analyses reported in Section 7 (on Tables A through C) performed by a contract laboratory or consulting firm? ☐ Yes ☑ No ➔ SKIP to Section 10.

9.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm			
Laboratory address			
Phone number			
Pollutant(s) analyzed			

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
110008226712	WA0045217	Kettle Falls Generating Station	

SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

10.1 In Column 1 below, mark the sections of Form 2F that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.

Column 1	Column 2
☑ Section 1	☐ w/ attachments (e.g., responses for additional outfalls)
☐ Section 2	☐ w/ attachments
☑ Section 3	☑ w/ site drainage map
☑ Section 4	☑ w/ attachments
☑ Section 5	☐ w/ attachments
☑ Section 6	☐ w/ attachments
☑ Section 7	☑ Table A ☐ w/ small business exemption request ☐ Table B ☐ w/ analytical results as an attachment ☑ Table C ☐ Table D
☐ Section 8	☐ w/attachments
☐ Section 9	☐ w/attachments (e.g., responses for additional contact laboratories or firms)
☑ Section 10	☐

10.2 Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Jason Thackston	SVP, Chief Strategy and Clean Energy Officer
Signature DocuSigned by: Jason Thackston EC91BFF9033645C...	Date signed Nov-27-2023 | 3:31 PM PST

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - North

Form Approved 03/05/19
OMB No. 2040-0004

TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

Pollutant or Parameter		Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	7.3 mg/L				1	
2.	Biochemical oxygen demand (BOD_5)	NA					
3.	Chemical oxygen demand (COD)	NA					
4.	Total suspended solids (TSS)	NA					
5.	Total phosphorus	5.43 mg/L				1	
6.	Total Kjeldahl nitrogen (TKN)	1.52 mg/L				1	
7.	Total nitrogen (as N)	1.52 mg/L				1	
8.	pH (minimum)	NA					
	pH (maximum)	NA					

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - South

Form Approved 03/05/19
OMB No. 2040-0004

TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

Pollutant or Parameter		Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	26.2 mg/L				1	
2.	Biochemical oxygen demand (BOD_5)	NA					
3.	Chemical oxygen demand (COD)	NA					
4.	Total suspended solids (TSS)	NA					
5.	Total phosphorus	3.34 mg/L				1	
6.	Total Kjeldahl nitrogen (TKN)	3.75 mg/L				1	
7.	Total nitrogen (as N)	3.75 mg/L				1	
8.	pH (minimum)	NA					
	pH (maximum)	NA					

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - North

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - North

Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Oil and Grease	7.3 mg/L				1	
Chromium, total	0.00812 mg/L				1	
Zinc, total	0.995 mg/L				1	
Nitrogen, total	1.52 mg/L				1	
Phosphorus, total	5.43 mg/L				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - South

Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Oil and Grease	26.2 mg/L				1	
Zinc, total	1.4 mg/L				1	
Nitrogen, total	3.75 mg/L				1	
Phosphorus, total	3.34 mg/L				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

This page intentionally left blank.

EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - North

Form Approved 03/05/19
OMB No. 2040-0004

TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
09/19/2017	240	0.04	3,600	15 gpm	3,600 gallons

Provide a description of the method of flow measurement or estimate.

Outfall has 3 round holes that flow approximately 5 gpm each, resulting in total flow of approximately 15 gpm.

EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
110008226712	WA0045217	Kettle Falls Generating Station	SW - South

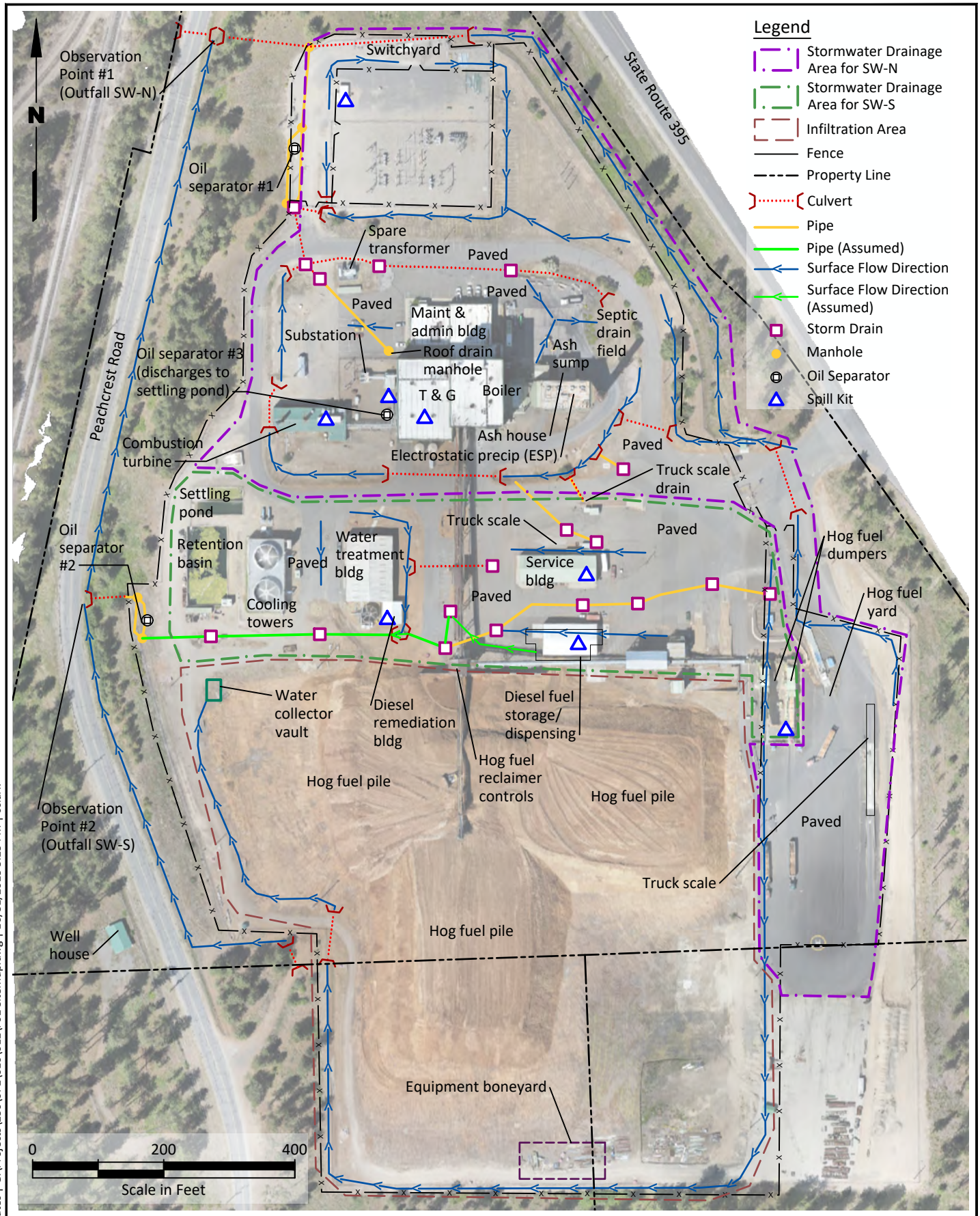
TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
09/19/2017	240	0.04	3,600	15 gpm	3,600 gallons

Provide a description of the method of flow measurement or estimate.

Outfall has 3 round holes that flow approximately 5 gpm each, resulting in total flow of approximately 15 gpm.



Source: Hydrometrics, Inc. 2014. Drone Imagery provided by Avista.

Map Date: 08/21/2023

Landau Associates | G:\Projects\236\072\010\012\F02 SiteMap.dwg | 10/31/2023 5:23 PM | cclark

LANDAU ASSOCIATES

Kettle Falls Generating Station Avista Utilities Kettle Falls, Washington	**Site Map**	Figure 2

ATTACHMENT A

Spill Control Plan

Kettle Falls Generating Station
Kettle Falls, WA

Spill Control Plan

September 2014

In the event of a spill call the Spill Phone at 509-998-0996

Table Of Contents

Avista Utilities

Kettle Falls Generating Station
Kettle Falls, WA

Spill Control Plan

Introduction

Avista Utilities has prepared this Spill Control Plan for the Kettle Falls Generating Station (KFGS) facility to minimize the potential for oil and water treatment chemical spills, to prevent accidentally spilled oil and water treatment chemicals from leaving the property, and to provide guidance in the cleanup of spilled oil and water treatment chemicals.

This plan has been prepared pursuant to the specific requirements for a Spill Control Plan and a Spill Prevention and Emergency Cleanup Plan outlined in National Pollutant Discharge Elimination System Waste Discharge Permit No. WA0045217 issued to Avista Corporation Kettle Falls Generating Station by State of Washington Department of Ecology, effective October 1, 2013.

Certification of Plan

I hereby certify and attest that:

1. I or my agent have visited and examined the facility,
2. I am familiar with the provisions of Waste Discharge Permit No. WA0045217;
3. This Spill Control Plan has been prepared in accordance with generally accepted engineering practice, including consideration of applicable industry standards;
4. The procedures for required inspections and testing have been established; and
5. This Spill Control Plan is adequate for the facility.

Name: Antonio Chavez

Date: September 17, 2014

(Stamp)

ANTONIO J. CHAVEZ
STATE OF WASHINGTON
37278
REGISTERED
PROFESSIONAL ENGINEER

9/17/2014

1. Facility Conformance

The KFGS is in conformance with the requirements listed in 40 CFR 112.7 and 112.8. In addition, the discharge prevention and containment procedures described in this Spill Control Plan have been prepared in accordance with: 1) the minimal prevention standards listed under 40 CFR 112.7, 2) IEEE Standard General Requirements for Liquid–Immersed Distribution, Power, and Regulating Transformers (Std C57.12.00-1993), 3) IEEE Standard for Containment and Control of Oil Spills in Substations (Std 980-2013), 4) the Avista Specifications for Oil Circuit Breakers and Accessories, and 5) periodic plant inspections of all equipment, which includes oil bearing equipment.

1.2 General Information

FACILITY: Kettle Falls Generating Station

TYPE OF FACILITY: The facility is a biomass fueled electrical generation plant.

LOCATION OF FACILITY: 1151 Hwy. 395 North, Kettle Falls, WA 99141

NAME AND ADDRESS OF OWNER/OPERATOR: Avista Utilities
1411 East Mission
Spokane WA 99220-3727
509-495-4610 (Dispatch)

DESIGNATED PERSON ACCOUNTABLE FOR OIL AND CHEMICAL SPILL PREVENTION AT FACILITY:

Greg Wiggins, Plant Supervisor
Work: (509) 738-1505 **Mobile**: (509) 690-2731

ENVIRONMENTAL CONTACT:

Bryce Robbert, Environmental Scientist
Work: (509) 495-4086 **Mobile**: (509) 227-9722

1.3. Facility Description

The KFGS and Switchyard facilities include the thermal plant, which generates the electric power and the associated switchyard that steps up the voltage and distributes it to the power grid. The facilities are adjacent to and are accessed from Highway 395 to the northwest of Kettle Falls, Washington. See Attachment A, Figure 1-1 for a site vicinity map.

The KFGS is a steam-electric generating station that uses a wood-waste fired spreader stoker boiler to produce steam to drive a single shaft turbine-generator for the production of electricity. The main KFGS turbine-generator is rated at 53.4 megawatts (MW). This facility was placed into service in 1983.

Also on site is a natural gas fired 7.2 MW combustion turbine-generator used for the production of electricity. This unit was placed into operation in 2002.

The KFGS is operated from a control room in the main turbine-generator building. The plant is operated 24 hours per day with at least two operators on duty at all times.

Facility Additions or Modifications:

Modifications to the secondary containment for diesel fuel aboveground storage tanks is planned to increase capacity sufficient for total containment of product plus required precipitation. A groundwater remediation treatment plant is planned for construction adjacent to the water treatment building. This plant will include 500 gallon diesel product recovery tank with secondary containment.

2. Oil And Chemical Inventory, Spill Potential, Containment Structures, And Spill Response

A tabulated inventory of facility oil-containing equipment, including predictions of spill direction, rate of flow and total quantity of oil and water treatment chemicals are presented in Attachment B, Oil and Chemical Inventory and Spill Prediction. Oil and petroleum products at this facility include: lubrication oils used in the lubrication oil systems for the generator set; transformer cooling oils used in the facility substation and switchyard transformers and OCBs; and lubrication greases for maintenance.

Oil storage equipment and containers are described below; see Attachment A, Figures 3-1, 3-1A, and 3-1B for their general location within the facility. The potential for an oil/chemical spill in each area, which is based on experience, and the containment provided are also described.

The discussions on containment below reference both passive and active measures for control of spills and leaks of petroleum and non-petroleum based products. Should spills migrate outside of buildings they will encounter native soils (and in some cases, a mix of native soils and ground wood) that will significantly slow the surface travel of liquid due to high infiltration rates. These soils have been identified by the Natural Resources Conservation Service (NRCS) as primarily loamy sands with little to no ponding or flooding potential. Attachment H has results of the soil survey by NRCS for the facility area.

2.1 Powerhouse (Boiler and Turbine Generator Buildings)

***Description*:**

The **Powerhouse** consists of seven floors: 1-Ground, 2-Mezzanine, 3-Operating, 4-Fuel Distribution, 5-Lower Boiler Level, 6-Upper Boiler Level, and 7-Deaerator.

The boiler is wood waste fired and rated at greater than 400,000 pounds of steam per hour. The steam is supplied to the turbine to produce mechanical energy for driving an AC generator.

The **mezzanine floor** houses the **main turbine lube oil reservoir** with a capacity of 1350 gallons. The operation of this reservoir meets the definition of oil-filled operational equipment. There are also **two 55-gallon drums of turbine oil** stored near the center of the floor.

The **ground floor** houses the **bulk turbine lube oil storage tank**, which is divided into two sections each having a capacity of 1400 gallons for a total of 2800 gallons. Also on the ground floor are the **turbine lube oil conditioner** with a capacity of 250 gallons, **three 55-gallon drums** south of the turbine lube oil storage tank for the collection of oily water, **two boiler feed pump lube oil reservoirs** with capacities of 35 and 55 gallons, and an **emergency diesel generator** holding 150 gallons of fuel.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

Oil leakage from the main turbine lube oil reservoir creates the potential for release of up to 1350 gallons of oil through the steel grating of the mezzanine floor and into the concrete containment structure on the ground floor. Depending upon the type of leak and which side of the reservoir the leak occurs there may be some spillage of lube oil outside of the concrete containment structure and onto the surrounding concrete floor. Loss of lube oil to the turbine would trigger an alarm in the control room.

The most likely cause of leakage from the turbine oil drums on the mezzanine floor would be from a faulty or accidentally ruptured drum. The maximum expected quantity of discharged oil would be 55 gallons. The oil would flow through the steel grating of the mezzanine floor and onto the ground floor.

The most likely cause of leakage from the bulk turbine lube oil storage tank or turbine lube oil conditioner would be from a faulty or accidentally ruptured tank or associated piping. The maximum expected quantity of discharged oil would be 1,400 gallons (the contents of the largest tank), and this would be contained within the associated concrete secondary containment structure.

Leakage from the oily water collection drums would release a maximum of 55 gallons of oily water into the concrete secondary containment structure or if a leaking drum is outside of the concrete secondary containment the release would be onto the concrete floor.

Leakage or rupture of the boiler feed pump lube oil reservoir or fuel tank of the emergency diesel generator creates the potential for the release of up to 55 gallons of oil or 150 gallons of diesel, respectively, onto the concrete floor.

***Containment*:**

Spills from the main turbine lube oil reservoir, the bulk turbine lube oil storage tank, and the turbine lube oil conditioner would be contained within the concrete secondary containment structure on the ground floor. The main turbine lube oil reservoir is directly above the secondary containment structure and the bulk turbine lube oil storage tank and turbine lube oil conditioner are within the secondary containment structure. See Attachment G for calculations of secondary containment capacity of the concrete secondary containment.

Leakage from the turbine oil drums on the mezzanine floor would flow through the steel grating of the mezzanine floor and spread onto the ground floor. Leakage from boiler feed pump lube oil reservoirs and emergency diesel generator tank would flow onto the ground floor surface. The ground floor is sloped in the direction of the embedded trench drains; oil released onto this floor would be captured by the trench drains and eventually end up in the oil water separator outside the southwest corner of the Turbine Generator Building. The feed pump lube oil reservoirs and emergency diesel generator tank are in high visibility locations and leaks would be noticed before the entire contents of the units

are emptied and reach the floor trench drains, allowing time for active containment measures by Avista personnel. The oil water separator diverts oil product to a separate buried 200 gallon waste oil tank. Should the capacity of the buried waste oil tank be exceeded the overflow would report to the two chamber settling basin and then to the retention pond. The retention pond discharges to the facility's industrial wastewater discharge outfall if the water quality meets the discharge limits of the facility's wastewater discharge permit.

2.2 Electrostatic Precipitator Building

***Description*:**

The roof of the Electrostatic Precipitator building houses **four (4) transformer rectifier units** each containing 180 gallons of silicone transformer oil.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, oil leakage from one of the rectifier transformers has the potential for release of up to 180 gallons of oil into the secondary containment surrounding each of the units.

***Containment*:**

There is adequate secondary containment around the transformer rectifiers to contain the contents of each of the transformer rectifiers. Should the secondary containment not function as intended then escaped oil will follow the route of precipitation runoff and spill off the north side of the roof down to pavement or bare ground (depending on which rectifier fails). If the oil reaches bare ground it will be intercepted by the facility's storm water drainage system, and will likely be absorbed by the sandy soil in the facility's drainage ditches. If the oil reaches pavement it will either flow to the nearest drainage ditch or it may encounter the ash load out ramp where it will be flow directly to a concrete sump that has sufficient capacity to contain the full contents of one of the transformers.

2.3 Combustion Turbine Building

***Description*:**

The combustion turbine building houses the natural gas fired 7.2 MW combustion turbine-generator used for the production of electricity. The **turbine-generator lube oil tank** has a capacity of 600 gallons.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, oil leakage from the one lube oil tank or associated piping has the potential for release of up to 600 gallons of oil onto the floor of the Combustion Turbine Building.

Containment:

The floor of the Combustion Turbine Building has floor drains that connect to a concrete sump located outside the southwest corner of the building. The sump is outfitted with a pump with float controls that automatically activate the pump at a prescribed liquid level. The pump discharges to the floor drain within the Boiler and Turbine Generator building, which then reports to the oil water separator #3 at the southwest corner of the building.

2.4 Facility Yard

***Description*:**

The above ground **diesel storage tanks** are east of the fuel pile, outside the perimeter fence. Fuel in the tanks is used for the rolling stock at the facility. The largest tank has a shell capacity of 20,000 gallons, the smaller a capacity of 12,000.

The **main reclaimer control cab oil tank**, just north of the fuel pile has a capacity of 250 gallons of hydraulic oil. Just above the main reclaimer control cab oil tank is the **main reclaim lube oil storage tank** with a capacity of 100 gallons.

To the west of the diesel storage tanks are **two (2) truck dumpers** with two hydraulic oil tanks containing 300 and 220 gallons for a total of 520 gallons on each truck dumper.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, leakage from the largest fuel storage tank has the potential for release of up to 20,000 gallons of diesel into the secondary containment structure.

Oil leakage from the main reclaimer control cab oil tank has the potential to release up to 250 gallons of oil onto the floor of the reclaimer control cab. Oil leakage from the main reclaim lube oil storage tank has the potential to release up to 100 gallons of oil into the secondary containment beneath the tank.

Leakage from one of the diesel/water mixture poly tanks has the potential for release of up to 1,500 gallons to unpaved ground.

Oil leakage from the truck dumper hydraulic tanks and associated piping has the potential to release up to 300 gallons of hydraulic fluid onto the surrounding concrete and into the adjacent concrete vault where the truck dumper is mounted.

***Containment*:**

The secondary containment structure surrounding the diesel storage tanks does not currently have the capacity to contain the contents of the largest fuel tank. Modifications will be made to the secondary containment to increase capacity to capture the contents of

the largest fuel tank plus surplus for required precipitation. See Attachment F for calculations of the increase in capacity required. A spill kit is maintained at the diesel storage tanks in the event of a spill during fuel transfer to the tanks or refueling of rolling stock. See Attachment C for the supplies to be maintained in the spill kits. The secondary containment structure is equipped with a gate valve for manually draining accumulated rainwater and preserving containment capacity. The manual gate valve that drains the secondary containment structure is always closed. Any water accumulating within the containment structure is manually drained after confirming that oil is not present.

The reclaimer control cab oil tank has no engineered secondary containment and containment will be provided by active measures. A spill from this unit will exit the control cab through either the west or east access doors. From the west door oil will contact the concrete pad surrounding the cab and either flow west to unpaved ground (that is covered with a ground wood and soil mix) or it will enter the access manway to the subsurface concrete fuel conveyor vault. The unpaved area will be able to absorb the spilled contents sufficiently to allow a cleanup response from onsite personnel. Once inside the vault the oil will drain to concrete sump. The vault/sump has sufficient capacity to contain the entire contents of the reclaimer control cab oil tank. Spilled oil leaving the east door will contact concrete before flowing north to unpaved ground with a similar ground wood and soil mix to the west side. The main reclaim lube oil storage tank has a secondary containment pan beneath the tank, which would hold a portion of the contents of the tank. The infrastructure surrounding this elevated tank does not allow for full volume secondary containment. Overflow from the containment pan would flow down to the concrete pad surrounding the reclaimer control cab and on to unpaved ground where active containment by Avista personnel can be deployed. The nearest spill kit to the reclaimer control cab and main reclaim lube oil storage tank is located in the service building. The absorption qualities of the unpaved area will be sufficient to slow movement of the oil until Avista personnel can respond. A loss of oil in either the reclaimer control cab oil tank or the main reclaim lube oil storage tank will directly affect operation of the fuel reclaimer. This will alert Avista personnel to inspect the units and deploy active containment measures as necessary.

Oil released from a truck dumper hydraulic system failure would either be spread north on concrete and asphalt to a storm drain or would be captured by the adjacent concrete vault, depending upon the location of the hose failure. Oil that is not captured by the concrete vault has the potential to reach the nearest drain that discharges to a drainage ditch that reports to oil water separator #2 to the west of the retention basin. Oil water separator #2 skims off oily material to an adjacent 200 gallon tank. The drainage ditch is unlined and the bottom and sides consist of a sandy soil and ground wood mixture that would slow the flow sufficiently to allow timely response by Avista personnel limiting the quantity of oil reaching the oil water separator. A loss of oil in any of the hydraulic oil tanks will be visible to the operators and will directly affect operation of the truck dumpers. This will alert Avista personnel to inspect the units and deploy active containment measures as necessary.

2.5 Water Treatment Building

***Description*:**

The Water Treatment Building contains an **emergency diesel fire pump fuel storage tank** with a capacity of 100 gallons. There are also four 55-gallon drums of new and used lubricants located in this building.

Non-petroleum products stored and used in this building include sulfuric acid, caustic, and other water treatment chemicals. The sulfuric acid tank and the caustic tank each have a capacity of 7,300 gallons. Other treatment chemicals are contained in 55-gallon drums.

Plans have been completed for design and installation of a treatment plant for extracted diesel-contaminated groundwater. The plant will be located in a building attached to the southwest corner of the Water Treatment Building. The building will contain a number of process tanks for treatment of the groundwater that are not subject to the SPCC rule. A 500 gallon steel tank will be in the building for storage of diesel product separated from the groundwater. See Attachment A, Figure 3-3, for a depiction of the planned treatment plant location.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, diesel leakage from the fuel tank has the potential for release of up to 100 gallons of diesel onto the floor of the Water Treatment Building. Leakage from the 55 gallon oil drums will leak into the drum containment vessels. Leakage from the acid and caustic tanks have the potential to release up to 7,300 gallons within the concrete containment. Releases from the drums of water treatment chemicals can release up to 55 gallons on to the concrete floor.

The diesel product storage tank has the potential to release up to 500 gallons of diesel.

***Containment*:**

There are floor drains in the concrete acid and caustic tanks containment area that report to a concrete sump beneath the concrete floor of the building. The sump is sized to contain the volume from one of the tanks. The floor of the Water Treatment Building is sloped in the direction of the embedded trench drains. Any petroleum product or water treatment chemical released onto the floor would flow into the nearest trench drain and then into a hard pipe connection to the settling basin. The settling basin has the capacity to contain the full contents of the bulk storage containers in the building. The petroleum product drums are positioned inside of containment vessels that are sized to contain the full contents of one 55-gallon drum.

The 500 gallon product storage tank will either be a double-wall unit (with 100% containment capacity) or will sit in a secondary containment unit for full capacity

containment.

2.6 Oil Storage Building

***Description*:**

At the southeast corner of the Powerhouse is the Oil Storage Building, used for storage of 55-gallon drums of hydraulic fluids and lubricants. Between **5-10 drums of hydraulic fluids and lubricants** are typically stored in this building.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

A leak or spill from one of the drums in the oil storage building has the potential to release up to 55 gallons of oil onto the floor of the building.

***Containment*:**

A release of material from the 55-gallon drums of hydraulic fluids and lubricants stored in the oil storage building would be contained in the building due to the elevated sill of the concrete floor of the building (approximately six inches).

2.7 Facility Substation

***Description*:**

The fenced facility substation west of the Powerhouse contains **one (1) 13.8/115kV generator step up transformer** with a capacity of 6,300 gallons and **two (2) 4160v/13.8kV/230 kV transformers** with capacities of 1,009 gallons each.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, oil leakage from the **13.8/115kV transformer** has the potential for release of up to 6,300 gallons of oil into the substation and surrounding yard. From a single incident, oil leakage from the **4160v/13.8kV/230 kV transformers** has the potential for release of up to 1,009 gallons of oil into the substation and surrounding yard.

***Containment*:**

Oil released in the substation will flow west across the unpaved ground on the north side of the combustion turbine building and be captured in an unlined drainage ditch that runs south alongside the west side the building until it discharges into an unlined storm drain ditch that runs north towards oil water separator #1 that is adjacent to the west side of the switchyard. The sandy soils in the yard and storm drain ditch will slow the progress of the spilled oil until Avista personnel can respond with active measures.

2.8 Switchyard

***Description*:**

The fenced switchyard north of the Administrative building contains **one (1) 13.8/115kV transformer** with a capacity of 3,150 gallons, **three (3) 115kV OCBs**, containing three phases each with separate oil tanks with capacities of 657 gallons for a total of 1,971 gallons for each OCB) and **six (6) voltage regulators** for the 12F1 and 12F2 feeders each having a capacity between 95 and 105 gallons.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, oil leakage from the 13.8/115kV transformer has the potential for release of up to 3,150 gallons of oil into the switchyard. From a single incident, oil leakage from one of the 115kV OCB tanks has the potential for release of up to 657 gallons of oil into the switchyard. Oil leakage from one of the voltage regulators has the potential for release of up to 105 gallons of oil into the switchyard.

***Containment*:**

At the switchyard, there is a gravel layer with a 3 to 6-inch depth inside the chain link fence. This gravel layer is expected to absorb and prevent spilled oil from the power transformer, OCBs, or voltage regulators from leaving the switchyard.

For the transformer and oil circuit breakers, the general secondary containment is provided by the gravel surface bed in combination with active containment measures by Avista personnel. This approach is discussed in the text of the U.S. Federal Register on December 26, 2006. In Section V. (Today's Action) B. Qualified Oil-Filled Operational Equipment, page 77275, the discussion describes the use of substation gravel beds and active containment measures to meet the general secondary containment requirements.

Attachment F. Calculations Estimating Distance summarizes the results of the overland flow model used to estimate the distance traveled by oil through the gravel bed. The retention time and travel distance of spilled oil within the gravel yard is dependent, in part, on the volume of oil spilled.

The transformer is more than 150 feet from the west fence line and thus closest to the river. A loss of the entire contents of the transformer would result in the front wave of oil traveling approximately 65 feet in 2 hours. This is sufficient time to allow for active response measures by Avista field personnel to contain the spill. Note that the overland flow model calculation does not take into account the gravel surface of the substation, so the above estimate represents a maximum possible spread; the actual spread of oil from the source will likely be less.

In addition, the surrounding diversion ditch will capture any oil that does move beyond the switchyard. The diversion ditch leads to oil water separator #1 located on the west side of the switchyard. Oil water separator #1 skims off oily material to an adjacent 200

gallon tank. The drainage ditch is unlined and the bottom and sides consist of a sandy soil that would slow the flow sufficiently to allow timely response by Avista personnel limiting the quantity of oil reaching the oil water separator.

2.9 Service Building

***Description*:**

Southeast of the Powerhouse is the Service Building used for storage of 55-gallon drums of hydraulic fluids, lubricants, greases, and antifreeze. Between 40-50 **drums of hydraulic fluids, lubricants, greases, and antifreeze** are typically stored in this building. A portable 250 gallon diesel storage tank is also kept in the building when it is not deployed elsewhere in the facility.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, oil leakage from one of the 55-gallon drums has the potential for release of up to 55 gallons of hydraulic fluid, lubricant, grease, or antifreeze onto the Service Building floor. The portable diesel storage tank has the potential to discharge 250 gallons.

***Containment*:**

The petroleum product drums that are actively being used are positioned on spill pallets for containment of spills or leakage. The pallet is sized to contain the full contents of one 55-gallon drum. The portable diesel AST is surrounded by a steel containment box that has the capacity to contain the full contents of the tank. Spills or leaks from other drums will contact and spread across the concrete floor. Should a leak occur near the access doors the leak will leave the building and flow towards a storm drain that ultimately reports to oil water separator #2 located west of the retention pond. Prior to reaching the oil water separator the drainage will flow through unlined ditches. The sandy soil and ground wood mixture lining the ditches will slow the movement of spilled oil allowing time for Avista personnel to respond. The Service Building is regularly accessed by Avista personnel and a spill would be contained with active measures utilizing the spill kits in the building.

2.10 Spare Transformer

***Description*:**

South of the Switchyard is **one (1) spare 13.8/115kV generator step up transformer** with a capacity of 9,874 gallons. This transformer is not energized.

***Potential Spill Occurrence (overflow, leakage, rupture)*:**

From a single incident, oil leakage from the spare **13.8/115kV transformer** has the

potential for release of up to 9,874 gallons of oil into the containment surrounding the transformer.

***Containment*:**

The secondary containment surrounding the transformer has the capacity to contain all of the oil within the transformer along with sufficient freeboard to accommodate precipitation.

The manual gate valve that drains secondary containment for the spare transformer is always closed. Any water accumulating within the dike is manually drained after confirming that oil is not present.

2.11 Spill Response: All Locations

Avista has a defined response procedure to detected oil spills. (See the current version of Avista document titled "Field Guide for Electrical Equipment and Other Spills" for additional details). It is important for Avista personnel to note whether the equipment contains PCBs (as indicated by labeling) in determining appropriate procedures.

At a minimum, three bales of sorbent pads will be kept in the Service Building. A supply of sandbags or other materials for holding the pads in place at the spill site will be kept with the sorbent pads. Drums containing spill control equipment listed in Attachment C will be kept at the facility at the following locations: 1) in the Service Building, 2) in the Turbine and Generator Building, 3) in the Water Treatment Building, 4) in the Switchyard, 5) in the Facility Substation, and 6) at the diesel storage tanks. Other spill containment equipment as Avista Utilities deems necessary will be kept with the minimum spill response equipment. It should be noted that any spills reaching unpaved areas will be slowed by the sandy soils prevalent throughout the facility. This should allow for a timely active containment response by Avista personnel.

Step 1: Determine if a spill has occurred.

Step 2: Secure the area – make the area safe from electrical and other physical hazards.

Step 3: Identify the source or cause of the spill and stop if possible. For example, shut off equipment or pumps or close valves as appropriate. Use the available spill response materials at the site (see Attachments A and D) to contain the spill and prevent the spill from spreading. For small spills, apply absorbent to the surface of the oil and reapply until there is enough to absorb all the liquid. For larger spills, use booms or construct earthen dikes around the spill to prevent the discharge from flowing off-site.

Step 4: Call the **spill phone** at **509-998-0996.** Follow all instructions given by the on call environmental staff person.

Step 5: Coordinating with the field personnel, the on call environmental staff person will determine if a spill response contractor will be called in. If the spill is large or involves a release of oil into water, Spill Contractor A listed in Section 5.3 (NRC Environmental) will be called by the on call environmental staff person. If the spill is small, field personnel or Spill Contractor B listed in Section 5.3 (Able Clean Up) will be called to assist in the cleanup. Field personnel should clean up the spill or assist the spill response contractor, as appropriate. All visible oil must be cleaned up. All contaminated materials (such as soil, rags, disposable personnel protective equipment) must be placed in drums, bags, or super-sacs. Drums and super-sacs are available from the local Avista storekeeper for the site. The on call environmental staff person will determine if additional sampling is necessary and when cleanup is complete.

Label all containers with an Avista “Pink and White” and ship the oil and oily debris back to the Spokane Service Center with a properly filled out shipping paper. As an alternative to shipping back to Spokane, arrangements can be made with the Stevens County Landfill for disposal of the oily debris. All oil and oily debris will be recycled or disposed of in accordance with state and federal regulations.

3. Design and Operating Information

3.1. Avista Utilities Procedures

Spill response will follow procedures described in this SPCC Plan and the current Avista document "Field Guide for Electrical Equipment and other Spills".

All spills are to be reported immediately to the spill phone (509-998-0996). Avista Utilities site personnel will initiate spill control and containment action immediately in the event of a spill.

Spills are recorded on the Avista Spill Report Form and include documentation of the spill response activities. These forms are maintained in the Avista Corp. Environmental Affairs central files.

3.2 Inspection and Records

General inspections of the plant, including oil storage areas and the settling basins, are conducted daily and discrepancies are noted in the plant log; this log is incorporated as part of this plan by reference.

Additionally, general service/maintenance-related equipment inspections are performed monthly in accordance with Operations Manual for the KFGS facility and NPDES inspections are conducted twice annually. A copy of the Operations Manual is maintained at the facility. An inspection of spill response equipment is also performed monthly. See Attachment E – 'Inspection Forms' for examples.

Spills are recorded on the Avista Spill Report Form, which includes documentation of the spill response activities. A sample of this form is included in Attachment E. These forms are maintained in the Avista Corp. Environmental Affairs central files.

The Spill Control Plan is kept on-site. One copy is kept at the Environmental Affairs office in Spokane and a second copy is kept at the Control Room at the facility.

The following records are kept in the Environmental Affairs Office for at least three years:

- documentation of all initial training and annual discharge prevention briefing sessions,
- a record of any spills that occur at the Site, including documentation of telephone notification, copies of confirmation reports, and a complete description of cleanup and prevention activities, and
- logs of personnel attending the annual Spill Control Plan briefing.

3.3 Security

The facility is fenced with 6-foot chainlink fencing topped with barbed wire. A security guard is on duty at the front gate during normal business hours (7:00 am to 5:00 pm) to prevent unauthorized entry. The outside area around the facility is illuminated at night. Security cameras are positioned around the facility (including at the outside diesel ASTs area) to provide additional security. At least two operators are on duty at the plant at all times. The fuel dispensers on the outside diesel ASTs are locked after normal business hours and the fueling area is enclosed by a security fence and gate.

The security measures at this facility are sufficient to

- secure and control access to all oil handling, processing and storage areas;
- secure master flow and drain valves;
- prevent unauthorized access to starter controls on oil pumps;
- secure out-of-service and loading/unloading connections of oil pipelines; and
- prevent acts of vandalism and assist in the discovery of oil discharges.

3.4 Training

Avista Utilities personnel at the KFGS are trained in the operation, maintenance, handling and use of equipment and material to prevent oil and chemical spills. In addition, the training will cover the contents of this Spill Control Plan, where copies of the plan can be found in case of emergencies or other need, locations of the spill cleanup materials and switches for controlling oil-containing equipment, and proper emergency response procedures. Personnel are also trained periodically on the applicable laws and regulations. The site personnel are also provided with a copy of the current version of the document titled “Field Guide for Electrical Equipment and Other Spills”.

Avista personnel who handle oil-filled equipment at the KFGS are trained in the operation, maintenance, handling and use of the equipment to prevent oil spills. In addition, personnel training will cover:

- the contents of this Spill Control Plan,
- the locations of copies of the plan for emergencies or other needs,
- the locations of spill cleanup materials,
- the proper emergency response procedures.

A copy of this Spill Control Plan will be placed in the Control Room at the facility, and in the Avista Utilities Environmental Affairs Department offices in Spokane.

Discharge prevention briefings are scheduled for all Avista oil-handling personnel at least once per year. Topics for presentation should include:

- reviews of any spill events and actions taken;
- malfunctioning components which may cause or contribute to a spill;
- proper maintenance procedures to minimize discharge to trench drains and oil water separators;
- updated spill prevention measures; and,
- any modifications to the Spill Control Plan of significance.

Any new employee whose job will involve handling oil or water treatment chemicals will receive initial Spill Control Plan training prior to assuming their responsibilities. Training records are maintained in the Avista Corporation Environmental Affairs central files.

3.5 Transfer Operations

This facility has no terminal connections for transfer of oil or petroleum products.

Transfer operations at this facility include:

- addition of diesel to the diesel ASTs,
- addition of hydraulic oil to the main reclaim lube oil storage tank,
- bulk oil transfers to/from large transformers,
- bulk oil transfers to/from the turbine lube oil system, and
- bulk acid and caustic transfers to tanks in the Water Treatment Building.

Before any oil or chemical transfer, absorbent pads will be placed under all valves and couplings where a loose connection may drip oil or chemical product. Avista personnel will remain on site during the entire transfer process to monitor for oil leaks and to shut down the oil/chemical transfer if any problems are discovered. Likewise, Avista personnel will remain on site during the acid/caustic transfer process. A spill kit will be kept in close proximity to the oil-transfer, as to be readily available in the case of a discharge.

Oil, fuel, or chemical spilled in the facility will be recovered for waste disposal at a permitted facility or recycled and the affected area thoroughly cleaned.

All delivery drivers shall have U.S. Department of Transportation hazardous material transportation training as required by Federal law. A facility employee will attend product transfers at all times.

Addition of Fuel (Diesel ASTs):

1. Access the spill control supplies in the warehouse to ensure supplies are available and easily accessible in the event of a spill;

2. The Avista representative will determine the available capacity (ullage) of the AST to be filled by reading the fuel gauge. This ullage is communicated to the fuel delivery contractor and marked in the appropriate log form.

3. Block the tank truck wheels.

4. Place drip pans under all pump hose fittings (if applicable) before unloading.

5. The Avista representative and the delivery contractor should ensure the fill nozzle is placed in the appropriate AST appurtenance.

6. Both the Avista representative and the delivery contractor will remain with the vehicle at all times during unloading. Gauges on the truck should be continuously monitored to ensure the ullage is not exceeded. If an overfill situation occurs, the loading or unloading of fuel must be stopped as soon as possible. Do not "top-off" tanks being refueled.

The following procedure should be used after fuel unloading is completed:

7. Record the amount of fuel transferred to the AST in the appropriate log.

8. Drain the fill hose and then ensure that all drain valves are closed (if applicable) before removal of the hose from the tank

9. Pour any fuel in the drip pans or spill container on the fill pipe into the AST (if it has the capacity) or dispose of appropriately.

10. Inspect the tank truck before removing the blocks to ensure the lines have been disconnected from the tank.

11. Remove the blocks from the truck wheels.

Bulk Oil Transfers to/from operating equipment (turbine, large transformers, OCBs)

Follow these steps when making such a transfer:

1. Block the tank truck wheels;

2. Before the oil transfer, absorbent pads should be placed under all valves and couplings where a loose connection may drip oil;

3. Avista personnel need to remain on site during the entire transfer process to monitor for oil leaks and to shut down the oil transfer if any problems are discovered;

4. A spill kit should be kept in close proximity to the oil-transfer, as to be readily available in the case of a release;

5. Place temporary covers on storm water drains that may be impacted by a break in the fill line(s);

6. Confirm that the intended tank is the one being filled or emptied;

7. Verify that the correct valves are opened or closed;

8. Start tanker pump to begin pumping oil, or open valve to gravity feed oil;

The following procedure should be used after oil unloading is completed:

9. Drain the fill hose and then ensure that all drain valves are closed (if applicable) before removal of the hose from the tank;

10. Inspect the tank truck before removing the blocks to ensure the lines have been disconnected from the tank;

11. Remove the blocks from the truck wheels.

Bulk Acid/Caustic Transfers to Tanks in Water Treatment Building

Follow these steps when making such a transfer:

1. Block the tank truck wheels;
2. Before the acid/caustic transfer, absorbent pads should be placed under all valves and couplings where a loose connection may drip product;
3. Avista personnel need to remain on site during the entire transfer process to monitor for leaks and to shut down the oil transfer if any problems are discovered;
4. A spill kit should be kept in close proximity to the transfer, as to be readily available in the case of a release;
5. Place temporary covers on storm water drains that may be impacted by a break in the fill line(s);
6. Confirm that the intended tank is the one being filled or emptied;
7. Verify that the correct valves are opened or closed;
8. Start tanker pump to begin pumping acid or caustic;

The following procedure should be used after acid/caustic unloading is completed:

9. Drain the fill hose and then ensure that all drain valves are closed (if applicable) before removal of the hose from the tank;
10. Inspect the tank truck before removing the blocks to ensure the lines have been disconnected from the tank;
11. Remove the blocks from the truck wheels.

3.6 Facility Drainage

All oil or chemical releases inside the fence line will eventually go into the plant drainage system and end up in either one of three (3) oil water separators or it may go to the settling basin. Should spills migrate outside of buildings they will encounter native soils

(and in some cases, a mix of native soils and ground wood) that will significantly slow the surface travel of liquid due to high infiltration rates. These soils have been identified by the Natural Resources Conservation Service (NRCS) as primarily loamy sands with little to no ponding or flooding potential. Attachment G has results of the soil survey by NRCS for the facility area. See attachment A, Figures 3-1, 3-2, and 3-3 for details on direction of drainage flow.

4. Spill Reporting Requirements

The Revised Code of Washington (RCW) Sections 90.48 and 90.56 regulate reporting of environmental spills in the State of Washington. Spills will be reported to the Washington Department of Ecology (Ecology) 24-hour Oil & Hazardous Materials Spill reporting hotline telephone number given in Section 5.3.

All spill notifications to regulatory agencies will be performed by on call environmental staff. It is critical to the company's environmental compliance effectiveness that the on call environmental staff person be notified as soon as possible using the spill phone, and to then communicate effectively with that person regarding progress of spill response.

4.1 IMMEDIATE AGENCY NOTIFICATION REQUIREMENTS

Notify the Washington Department of Ecology (DOE) **within 1 hour** if any of the following conditions apply:

1. A spill is in progress and out of control; or
2. The quantity of oil spilled presents a threat to human health or the environment.

In addition to the DOE, notify the National Response Center immediately if:

3. The spill is threatening a waterway.

Note: Use instructions on the reverse side of the Avista Spill Report form for PCB reporting guidance.

In order to respond properly, the Avista Utilities person making a report must provide the on call environmental staff person responding to the spill phone with the correct information.

When Avista contacts the National Response Center, the NRC staff person will ask for the following information:

Your name, location, organization, and telephone number.
Name and address of the party responsible for the incident.
Date and time of the incident.
Location of the incident.
Source and cause of the release or spill.
Types of material(s) released or spilled.
Quantity of materials released or spilled.
Danger or threat posed by the release or spill.
Number and types of injuries (if any).
Weather conditions at the incident location.
Any other information that may help emergency personnel respond to the incident.

4.2 POST CLEAN-UP NOTIFICATION REQUIREMENTS

A written report summarizing the spill event and corrective actions taken should be submitted to Washington Department of Ecology within one month of the event by the Avista Utilities Environmental Affairs Department.

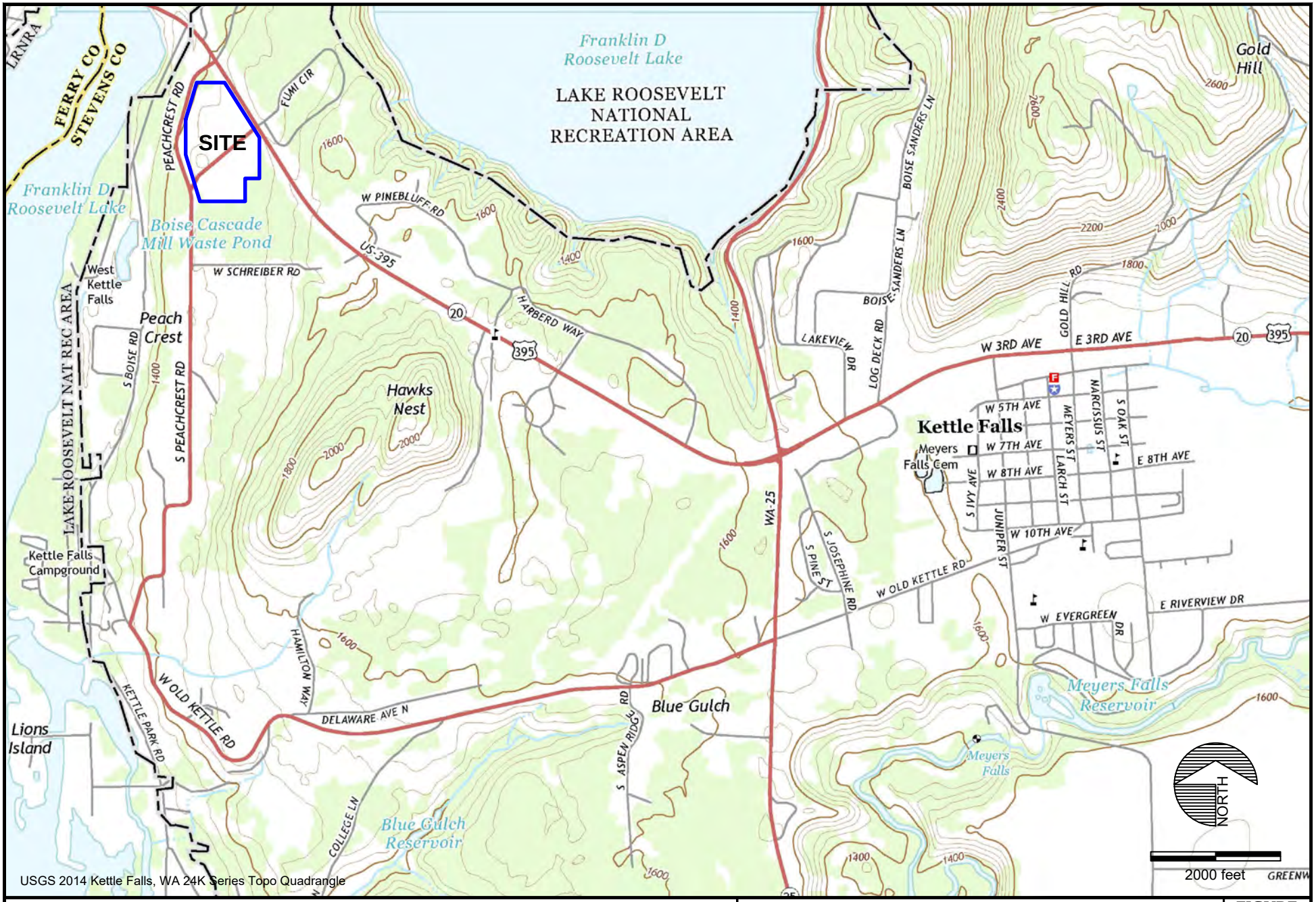
4.3 SPILL RESPONSE EMERGENCY TELEPHONE NUMBERS

RESPONSIBILITY:	NAME:	TELEPHONE NUMBERS:
Avista Spill Response:	Spill Phone	509-998-0996
Primary Avista Utilities Contact	Merlin Scacco, Environmental Scientist	Off: (509) 738-1510 Mobile: (509) 680-5504
Avista Utilities Environmental Contact	Bryce Robbert, Environmental Scientist	Off: (509) 495-4086 Mobile: (509) 227-9722
Avista Corporate Communications	(Whoever Answers)	(509) 495-4174
Medical Emergency	Fire, Police, or Ambulance	911
On call environmental staff to make the following notifications, as appropriate:		
Washington DOE (24-hour Spill Reporting)	(Whoever Answers)	Oil Spills: (800) 258-5990
Washington DOE, Spokane	(Whoever Answers)	(509) 329-3400
National Response Center	(Whoever Answers)	(800) 424-8802
Stevens County	Emergency Management-Stevens County Sheriff	911
Spill Contractor A	NRC Environmental Services Co.	(800) 337-7455
Spill Contractor B	Able Clean-up Technologies, Spokane	(509) 991-9442

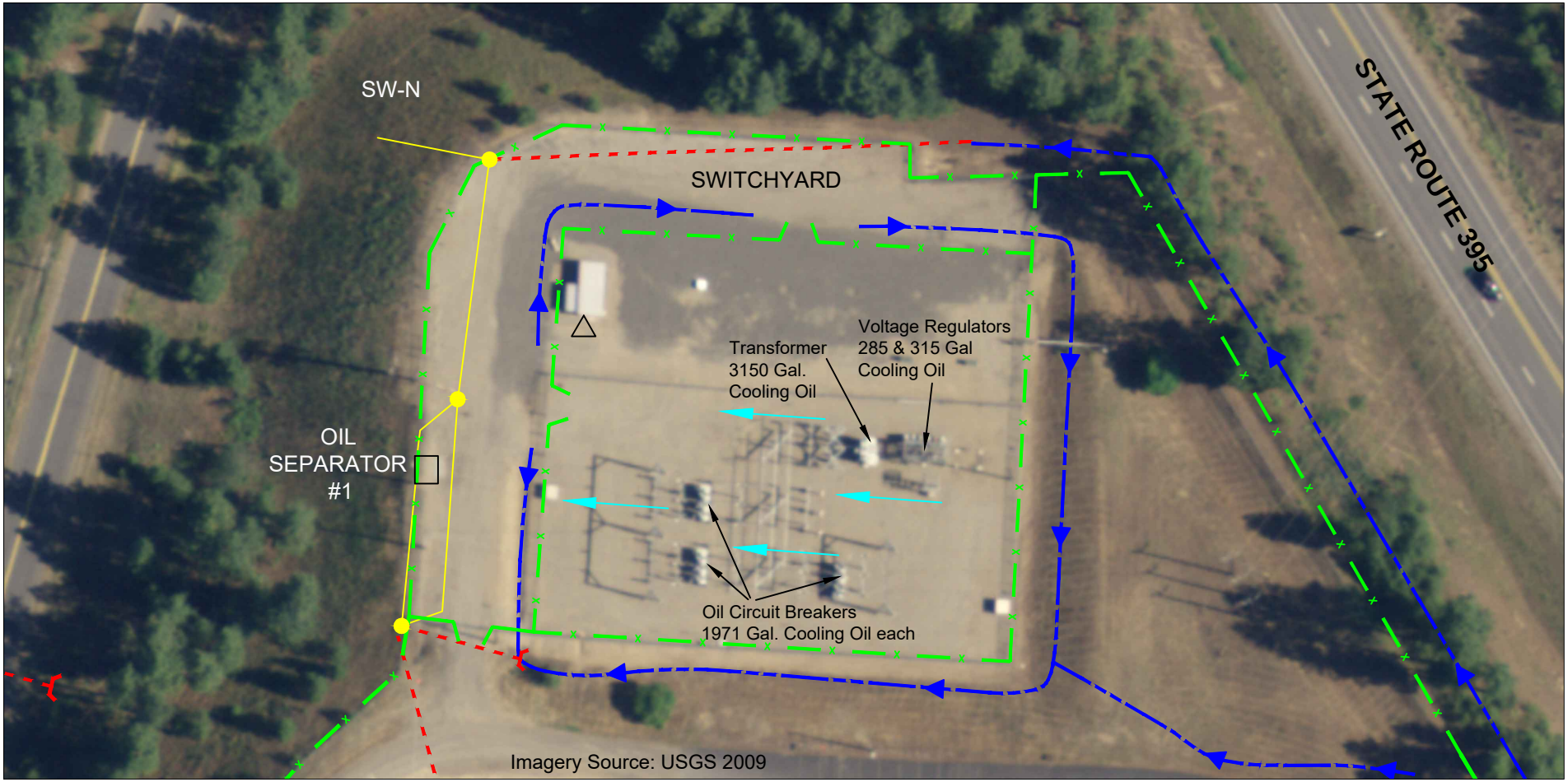
4.4 CONFORMANCE WITH LOCAL RULES, REGULATIONS AND GUIDELINES

The state of Washington does have a state-specific spill prevention, control, and countermeasure regulation for aboveground tanks that store petroleum. This plan conforms to the applicable requirements of Washington's regulations, (Chapter 9056 RCW).

Attachment A
Vicinity Map/Site Plans



KETTLE FALLS GENERATING STATION AVISTA UTILITIES	SPILL CONTROL PLAN VICINITY MAP	FIGURE 1-1



Explanation

- Culvert
- Security Fence & Gates
- Pipe
- Ditch Flow Direction
- Direction of Flow in Yard
- Spill Kit
- Manhole

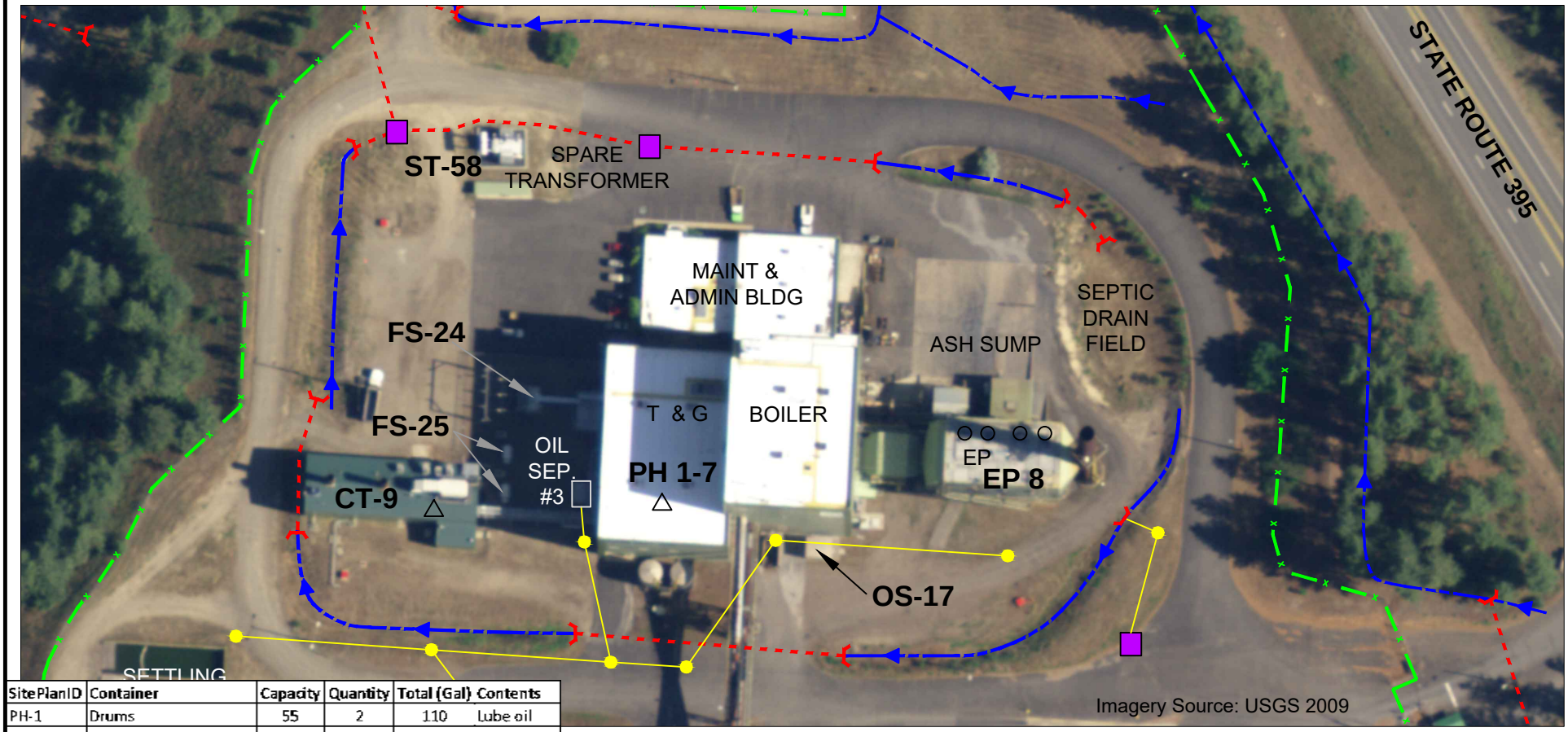
NORTH

80 feet

KETTLE FALLS GENERATING STATION AVISTA UTILITIES	SPILL CONTROL PLAN SWITCHYARD SITE PLAN	FIGURE 3-1

Project No.14012.00 8/28/2014

Hydrometrics, Inc.
Consulting Scientists and Engineers



SitePlanID	Container	Capacity	Quantity	Total (Gal)	Contents
PH-1	Drums	55	2	110	Lube oil
PH-2	Turbine LO Reservoir	1350	1	1350	Lube oil
PH-3	Turbine LO AST	1400	2	2800	Lube oil
PH-4	Turbine LO Conditioner	250	1	250	Lube oil
PH-5	Drums	55	3	165	Oily water
PH-6	Boil feed pump LO res.	55	1	55	Lube oil
PH-7	Emerg. Diesel Gen.	150	1	150	Diesel
EP-8	Transformer	180	4	720	Cooling Oil
CT-9	Turbine Gen. LO Tank	600	1	600	Lube oil
OS-17	Drums	55	5-10	55	Lube/Hydr. Fluids
FS-24	Transformer	6300	1	6300	Cooling Oil
FS-25	Transformer	1009	2	2018	Cooling Oil
ST-58	Spare Transformer	9874	1	9874	Cooling Oil

Explanation

- Culvert
- Security Fence & Gates
- Pipe
- Ditch Flow Direction
- Spill Kit
- Manhole
- Storm Drain

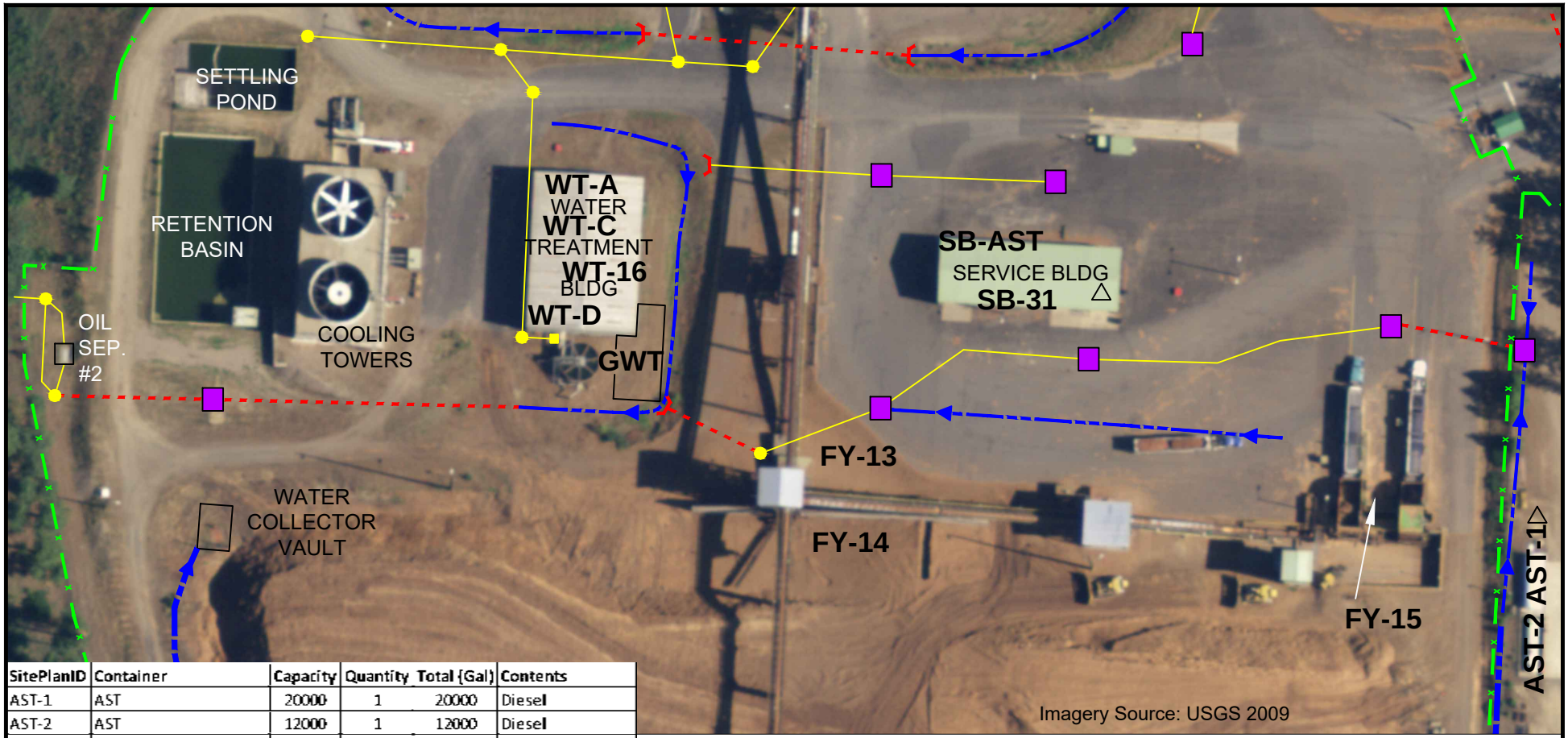
NORTH

100 feet

KETTLE FALLS GENERATING STATION
AVISTA UTILITIES

SPILL CONTROL PLAN
FACILITY CENTER SITE PLAN

FIGURE **3-2**



SitePlanID	Container	Capacity	Quantity	Total (Gal)	Contents
AST-1	AST	20000	1	20000	Diesel
AST-2	AST	12000	1	12000	Diesel
FY-13	Reclaim control cab oil tank	250	1	250	Lube oil
FY-14	Reclaim oil storage tank	100	1	100	Lube oil
FY-15	Truck Dumper Reservoirs	1@220 1@300	2	1040	Hydr. Oil
GWT	Product storage tank	500	1	500	Diesel/water
WT-A	Horizontal tank	7300	1	7300	Sulfuric Acid
WT-C	Horizontal tank	7300	1	7300	Caustic
WT-16	Fire pump diesel tank	100	1	100	Diesel
WT-D	Drums	55	4	220	Lube oil
SB-31	Drums	55	40-50	2750	Hydr./Lube oil/ Antifreeze
SB-AST	AST-portable	250	1	250	Diesel

Explanation

- Culvert
- Security Fence & Gates
- Pipe
- Ditch Flow Direction
- Spill Kit
- Manhole
- Storm Drain

NORTH

100 feet

KETTLE FALLS GENERATING STATION
AVISTA UTILITIES

SPILL CONTROL PLAN
SOUTH SITE PLAN

FIGURE
3-3

Hydrometrics, Inc.
Consulting Scientists and Engineers

Attachment B
Oil and Chemical Inventory and Spill Prediction Data

Attachment B
Oil and Chemical Inventory and Spill Prediction Data
Kettle Falls Generating Station

Location	Type of Container	Quantity	Volume Per Container (Gal)	Total Shell Volume (Gal)	Spill Potential (Overflow, Leak, Rupture)	Type of Oil	Containment	Direction of Flow	Potential Flow Rate (Gpm)
Powerhouse	Main turbine lube oil reservoir	1	1350	1350	Piping leak, tank rupture	Lube oil	Secondary containment structure	Oil spill would be contained by secondary containment on main floor and floor drains.	<100
“	Drums	2	55	110	Leak/rupture	Lube oil	Floor drains of Powerhouse	If oil escapes drum, should be contained within Powerhouse floor drains which should prevent release	<2
“	Bulk turbine lube storage tank	2	1400	2800	Piping leak, tank rupture	Lube oil	Secondary containment structure	Oil spill would be contained by secondary containment.	<100
“	Turbine lube oil conditioner	1	250	250	Piping leak, tank rupture	Lube oil	Secondary containment structure	Oil spill would be contained by secondary containment.	<25
“	Drums	3	55	165	Leak/rupture	Oily water	Secondary containment structure	Oil spill would be contained by secondary containment.	<2
“	Boiler feed pump lube oil reservoir	1	55	55	Leak/rupture	Lube oil	Floor drains of Powerhouse	If oil escapes, should be contained within Powerhouse which should prevent release	<5
“	Emergency Diesel Generator	1	150	150	Leak/rupture	Diesel	Floor drains of Powerhouse	If oil escapes, should be contained within Powerhouse which should prevent release	<15
Electrostatic Precipitator Building	Transformer Rectifier	4	180	720	Leak/rupture	Cooling oil-silicone	Secondary containment around each transformer	Oil spill would be contained by secondary containment.	<15
Combustion Turbine Building	Turbine-Generator lube oil tank	1	600	600	Piping leak, tank rupture	Lube oil	Floor drains to sump next to Combustion Turbine Building	If oil escapes tank or piping should be contained sump which would prevent release	<50
Facility Yard	Diesel storage tanks	1	1 @20,000 1 @12,000	32,000	Leak/rupture	Diesel	Secondary containment structure	Oil spill would be contained by secondary containment. If containment is breached, flow would be to the west across yard	<1000
“	Main reclaimer control cab oil tank	1	250	250	Leak/rupture	Lube oil	Active if encounters soil or conveyor sump	Oil spill would be contained by secondary containment in conveyor sump or east/west to unpaved area.	<25
“	Main reclaim lube oil storage tank	1	100	100	Leak/rupture	Lube oil	Secondary containment pan if small spill.	Small oil spill would be contained by secondary containment then unpaved soils.	<10

Attachment B
Oil and Chemical Inventory and Spill Prediction Data
Kettle Falls Generating Station

Location	Type of Container	Quantity	Volume Per Container (Gal)	Total Shell Volume (Gal)	Spill Potential (Overflow, Leak, Rupture)	Type of Product	Containment	Direction of Flow	Potential Flow Rate (Gpm)
“	Truck dumpers	2	2 @300 2 @220	1,040	Leak/rupture	Hydraulic oil	Concrete vault or into yard	Oil spill would be contained by truck dumper vault or would spread across yard to the west and eventually into unlined ditch prior to oil water separator.	<25
Water Treatment Building	Fire pump diesel fuel storage tank	1	100	100	Leak/rupture	Diesel	Settling basin	If fuel escapes tank, will enter floor drains that report to settling basin.	<10
‘’	Drums	4	55	220	Leak/rupture	New/used lube oils	Secondary containment tub and welded pan	Spills would be contained in secondary features.	<2
“	Horizontal Tank	1	7300	7300	Leak/rupture	Sulfuric Acid	Concrete secondary containment	A spill would enter a floor drain in the containment and flow to a larger floor sump.	
“	Horizontal Tank	1	7300	7300	Leak/rupture	Caustic	Concrete secondary containment	A spill would enter a floor drain in the containment and flow to a larger floor sump.	
GW Remediation Treatment Plant	Steel Tank	1	500	500	Leak/rupture	Diesel product	Secondary containment	A spill would be contained by the dedicated secondary containment.	<25
Oil Storage Building	Drums	5-10	55	550	Leak/rupture	Hydraulic fluids, lubricants	Floor of Oil Storage Building	If oil escapes drum, should be contained within building which would prevent release	<2
Facility Substation	13.8/115kV GSU Transformer #50894-1	1	6,300	6,300	Leak/rupture	Cooling oil-mineral	Active and Oil Water Separator #1	Toward the west - If oil escapes transformers, it will flow west toward and into ditch towards oil water separator #1.	<500
“	4160v/13.8kV 230 kV Transformers #SET2009-0101 #SET2009-0102	2	1,009	2,018	Leak/rupture	Cooling oil-mineral	Active and Oil Water Separator #1	Toward the west - If oil escapes transformers, it will flow west toward and into ditch towards oil water separator #1.	<100
Switchyard	13.8/115kV Transformer #L252927	1	3,150	3,150	Leak/rupture	Cooling oil-mineral	Gravel in yard, dike surrounding switchyard	If oil escapes transformer, would spread out over switchyard and into containment dike.	<300
“	115 kV OCBs #40900-10 #40900-11 #40900-12	3	657 (3 per OCB)	5913	Leak/rupture	Cooling oil-mineral	Gravel in yard, dike surrounding switchyard	If oil escapes transformer, would spread out over switchyard and into containment dike.	<50

Attachment B
Oil and Chemical Inventory and Spill Prediction Data
Kettle Falls Generating Station

Location	Type of Container	Quantity	Volume Per Container (Gal)	Total Shell Volume (Gal)	Spill Potential (Overflow, Leak, Rupture)	Type of Product	Containment	Direction of Flow	Potential Flow Rate (Gpm)
‘’	Voltage Regulators #M-582653 #M-045435 #M-578039 #M-576298 #M-582665 #J-227794	2	3 @95 3 @105	600	Leak/rupture	Cooling oil-mineral	Gravel in yard, dike surrounding switchyard	If oil escapes transformer, would spread out over switchyard and into containment dike.	<50
Service Building	Drums	40-50	55	2,750	Leak/rupture	Hydraulic fluid, lubricants, greases, and antifreeze	Active on floor of Service Building and outside	If oil escapes drum, it may escape building and flow into storm drain to unlined ditch prior to oil water separator.	<2
‘’	Portable Diesel Tank	1	250	250	Leak/rupture	Diesel fuel	Welded metal pan	If fuel leaks, full containment by pan should occur.	<10
Spare Transformer	G892-01	1	9,874	9,874	Leak/rupture	Cooling oil-mineral	Concrete vault	If oil escapes transformer, would spread out into surrounding concrete vault.	<500
Total				**86,415**					

Attachment C
Recommended Inventory for Spill Response Kits

Attachment C
Recommended Inventory for Spill Response Kit(s)

Recommended Inventory for Spill Response Kits in Thermal Facilities

Material	Amount	Use
Absorbent Pads	1 bundle (100 pads)	Place on top of spill material, will absorb oil and not water
Absorbent Socks	2-72”, 4-24”	Use to surround spill or block path if flowing
Sandbags (empty)	50 bags minimum	Fill with soil from site and use to create temporary berms to block flowing oil (backup to socks)
Shovels	2 each	Use to fill sandbags, sprinkle absorbent, trenching
Absorbent Powder	2-3 bags	Sprinkle over remaining material to complete cleanup (a little goes a long way)
5-Gallons Buckets w/lids	2	To collect used absorbent powder, only required in spill kit at fueling area(s)

Recommended Inventory for Spill Response Kits in Substation/Switchyard

Material	Amount	Use
Absorbent Pads	2 bundle (100 pads)	Place on top of spill material, will absorb oil and not water
Absorbent Powder	2-3 bags	Sprinkle over remaining material to complete cleanup (a little goes a long way)
Valve Wraps	4 each	Contain leaks from from valves, flanges, and fittings.
6 mil Plastic Bags	4 each	Use to contain spill debris.
Material Waste Labels	4 each	Use to label plastic bags

Note: These ‘kits’ are usually stored in yellow drums. Some facilities may have additional spill response materials (booms, drain covers).

In addition, the following items are available from the Spokane Service Center Warehouse. To order, use the Material Requirements Requisition Form available on AVAnet under Departments, Supply Chain, Supply Chain Forms & Documents.

Stock Number	Description
620.0016	3" x 4' Absorbent Sock
620.0020	ABSORBENT, OIL SPILL, BULK, 10# BAGS
620.1000	HAZ MAT, PORTABLE VEHICLE KITS
620.1003	HAZ MAT, BUCKET, 5 GAL. YELLOW
620.1004	LIDS, FOR 5 GAL YELLOW BUCKETS
620.1005	HAZ MAT, OIL SORBENT BOOMS, 5" X 10'
620.1006	Oil Nets
620.1010	HAZ MAT, OIL SORBENT BILGE BOOMS, 8" X 18"
620.1015	HAZ MAT, OIL SORBENT PILLOWS, 14" X 25"
620.1020	HAZ MAT, OIL SORBENT PADS, 16" X 20"
620.1023	HAZ MAT, CAUTION YELLOW PADS 16" X 20"
620.1025	HAZ MAT, REPLACEMENT FILTER PILLOW 17"X32"
620.1030	HAZ MAT, SLIKWIK PILLOWS, 18" X 18"
620.1035	HAZ MAT, PASSIVE SKIMMER
620.1050	HAZ MAT, SLIKWIK DRUM COVERS, 55 GAL DRUMS
620.1053	HAZ MAT, 55 GAL DRUM LINERS, 6 MIL, 36" X 63"

Attachment D

Inspection and Reporting Forms

Spill Potential

Inspector(s) _____ Date_____

_____

Industrial Facility _____

Industrial Address _____

_____

_____

Industrial Contact _____ Phone_____

Other Sources of Data _____

Type of Spill _____

_____

Facility Location _____

_____

Type of Materials _____

_____

Potential Volume _____

_____

Possible Causes _____

_____

_____

Spill Containment _____

_____

Other Comments _____

_____

_____

Facility Runoff

Inspector(s) _____ Date_____

_____

Industrial Facility _____

Industrial Address _____

_____

_____

Industrial Contact _____ Phone_____

Runoff Collection _____

Point _____

Description of _____

Contributing Area _____

_____

_____

Potential Runoff Characteristics

Description of Source	Contamination Potential	Drainage Path
Parking Lots		
Shipping Areas		
Receiving Areas		
Material Storage		
Other Areas		

Correlation of Data

(page 1)

Inspector(s) _____ Date_____

_____

Industrial Facility _____

Industrial Address _____

_____

_____

Industrial Contact _____ Phone_____

Outfall ID _____

Outfall Location _____

_____

Manhole ID _____

Manhole Location _____

_____

Process ID _____

Process Location _____

_____

Process Description _____

_____

_____

Other Comments _____

_____

_____

_____

_____

_____

_____

_____

Correlation of Data

(page 2)

SIMILAR CHARACTERISTICS

	Outfall ID_____	Manhole ID_____	Process ID_____
Physical Observations			
Odor	_____	_____	_____
Color	_____	_____	_____
Turbidity	_____	_____	_____
Floatables	_____	_____	_____
Residue	_____	_____	_____
Vegetation	_____	_____	_____
Structural Damage	_____	_____	_____
Chemical Analysis			
pH	_____	_____	_____
TDS	_____	_____	_____
Conductivity	_____	_____	_____
Other Parameters			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Site Inspection Checklist

SITE:_____ **DATE:**_____

Suggested Areas to Inspect

- Loading and unloading operations
- Outdoor storage areas
- Outdoor manufacturing or processing activities
- Significant dust or particulate generating processes

Visual Inspection Checklist	Action Required (Y or N)
Corroded drums or drums with plugs (that could fill up with rain water and overflow)	
Corroded or damaged tanks, tank supports, and tank drain valves	
Torn Bags or bags exposed to rain water	
Corroded or leaking pipes	
Leaking or improperly closed valves and valve fittings	
Leaking pumps and/or hose connections	
Broken or cracked dikes, walls or other physical barriers designed to prevent storm water from reaching stored materials	
Windblown dry chemicals	
Improperly maintained or overloaded dry chemical conveying systems	
Good Housekeeping Checklist	**Action Required (Y or N)**
Are outside areas kept in a neat and orderly condition?	
Is there evidence of drips or leaks from equipment or machinery onsite?	
Is the facility orderly and neat? Is there adequate space in work areas?	
Is garbage removed regularly?	
Are walkways and passageways easily accessible, safe, and free of protruding objects, materials or equipment?	
Is there evidence of dust on the ground from industrial operations or processes?	
Are cleanup procedures used for spilled solids?	
Is good housekeeping included in the employee program?	
Are good housekeeping procedures and reminders posted in appropriate locations around the workplace?	

Are there regular housekeeping inspections?	

Site Inspection Checklist

(continued)

SITE:_____ **DATE:**_____

Site Assessment Checklist	**Action Required (Y or N)**
Are there signs of poor housekeeping (cluttered walkways, upswept floors, uncovered materials, etc.)?	
Are there spots, pools, puddles, or other traces of oil, grease, or other chemicals on the ground?	
Is there discoloration, residue, or corrosion on the roof or around vents that ventilate or drain work areas?	
Do you see leaking equipment, pipes, containers, or lines?	
Are there areas where absorbent materials (kitty litter, saw dust, etc.) are regularly used?	
Do you notice signs such as smoke, dirt, or fumes that indicate material losses?	
Do you smell strange odors, or experience eye, nose, or throat irritation when you first enter the work area? These are indications of equipment leaks.	
Do storage containers show signs of corrosion or leaks?	
Are there open containers, stacked drums, shelving too small to properly handle inventory, or other indications of poor storage procedures?	
Are containers properly labeled?	

Comments:_____

AGENCY SPILL REPORTING FORM

1. GENERAL	
Name of Facility: **Kettle Falls Generating Station**	Address:
Completed By:	Organization:
Position:	Phone:
2. SPILL INFORMATION	
Date:	Time:
Location at Facility:	Total Quantity Discharged:
Substance Spilled:	Estimate of Quantity which reached navigable waters:
Other:	

3. OUTSIDE NOTIFICATIONS:		
Contacts	**Recorder at Outside Agency**	**Date and Time**
Call **9-1-1** (or the local emergency agency), if there is an immediate emergency		
EPA, and/or **National Response Center** and/or **U.S. Coast Guard : (800) 424-8802**		
Washington Department of Ecology: **(800) 258-5990**		

5. INFORMATION ON SOURCE AND CAUSE
6. DESCRIPTION OF ENVIRONMENTAL DAMAGE (description of all affected media and injuries)
7. CLEANUP ACTION(S) TAKEN (was an evacuation necessary?) 112.7(a)(4)
8. CORRECTIVE ACTION(S) TO PREVENT FUTURE SPILLS

Note: All information must be filled in. If something is unknown, write “unknown.”

Spill Report

Background

Location Address: _____

Nearest Avista Facility: _____

Est. Date/Time of Spill: _____

Material Spilled: _____

Quantity (gal.): _____

Description of Spill:

Spill Reported By: _____

Electrical Equipment: _____

Serial/Stencil #: _____

PCB Oil Content: _____

Info source: _____ (nameplate, database, test)

Contacts or Property Owners: _____

Initial Action Taken:

Spill Phone Called? (yes/no/by whom):

Agency Notification Required?

Follow Up

Cleanup Type:

If Avista Staff, # of Crew:

# of Hours On-Site:

Lab Results:

Describe Any Cleanup Actions:

Cleanup Completion Date:

Form Completed By/Title:

Date:

Attachment E

Calculations Estimating Distance Travelled

Attachment E

Calculations Estimating Distance Travelled

KFGS-OVERLAND FLOW MODEL FOR OIL SPILL

Numerical Background

$V = A \times H$	V = Oil volume in cubic feet A = Surface area of oil spread in square feet H= Oil thickness in feet	
$A = (\Theta/2)x(R^2 - Ro^2)$	Θ = Land spill angle in radians R^2 = Final spread radius in feet Ro^2 = Initial spread radius in feet	360 degrees = 6.28 radians 270 degrees = 4.71 radians 180 degrees = 3.14 radians
$U = (gSH^2)/(4\mu)$	U = Average flow velocity in feet per second g = Acceleration via gravity ([32.3 ft/s²]) S = Ground slope μ = Kinematic oil viscosity in feet² per second	
$D = UT$	D = Travel distance in feet T = Travel time in seconds	

Also

$D = R - Ro$

Initial Setup

Ro^2 =	100	ft	Assumption based on volume
V =	422.1	ft^3	Based on 3150 gallons of spilled fluid
g =	32.2	ft/s^2	
Θ =	4.71	rad	Spill with transformer acting as point source
S =	0.001		Flat Ground
μ =	0.0001	ft^2/s	Based on Mineral Transformer Oil properties data sheet (Substech.com)
T =	2	hour	Assumed travel time

Calculations

Seed R = 164.4 feet

A =	40099.4328	D =	64.2	feet	via UT
H =	0.01052633	D =	64.4	feet	via R - Ro
U =	0.0089197				

Reference:

Guo, J.C.Y, 2005. "Overland flow model for asphalt oil spills", Journal of Environmental Management May 19, 2005.

Attachment F
Secondary Containment Calculations

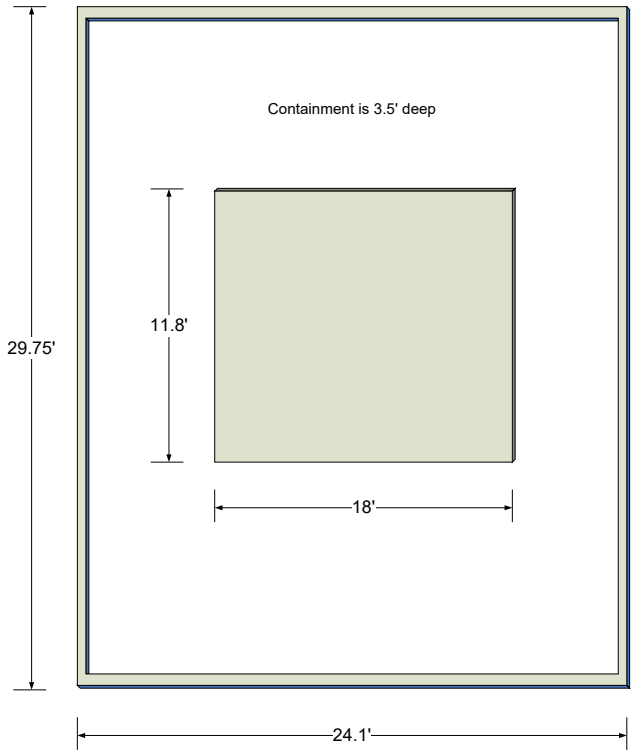
Attachment F
Secondary Containment Calculations

Kettle Falls Generating Station, Spare Transformer-Secondary Containment Calculation

Givens: Conversion: 7.48 pounds of oil = 1 gallon, so 0.1337 ft^3 = 1 gallon of water
Volume of a rectangle: V = l x w x h
Oil Volume of transformer = 9,874 gallons

Assumptions: Use density of oil to determine potential headroom in containment. Assume containment contains water from 25-year, 24-hour precipitation event.

Calculation: Sketch of Secondary Containment



Total Volume of Containment	=	24.1' x 29.75' x 3.5'	=	2,509.4 ft3
Subtract				
Transformer Pad	=	18' x 11.8' x 3.5'	=	734.4 ft3
Remaining Volume, Containment =			=	1,774 ft3
Convert to gallons =		1,774 ft3 x 1 gal/0.1337 ft3	=	13,268 gallons
Subtract Precipitation =		2.2"/12" x 506.9 ft2	=	93 gallons
Remaining capacity =		**13,175 gallons which is sufficient**		

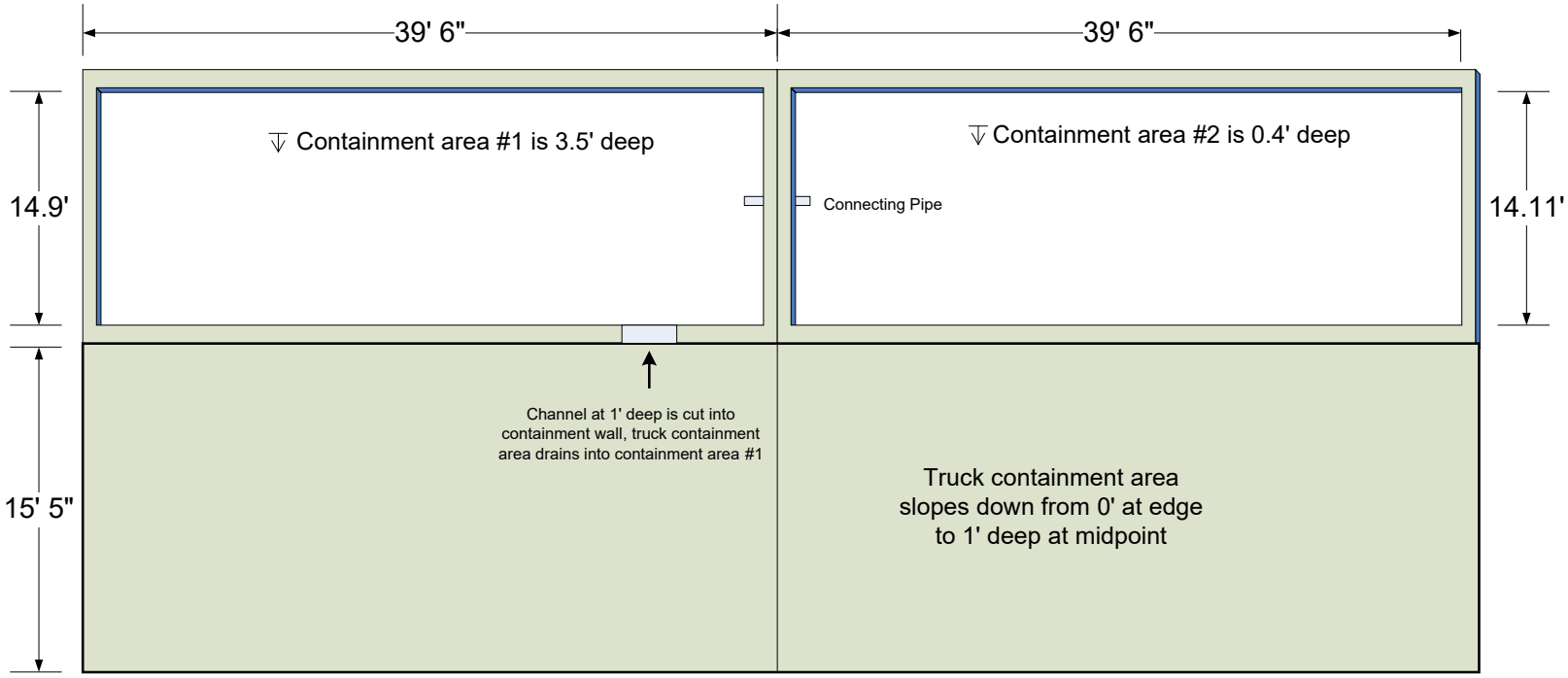
Attachment F
Secondary Containment Calculations

Kettle Falls Generating Station, Diesel Fuel Tanks-Secondary Containment Calculation

Givens:	Conversion:	7.48 pounds of oil = 1 gallon, so 0.1337 ft^3 = 1 gallon of oil
	Volume of a rectangle:	V = l x w x h
	Volume of triangular prism	V = ½ x b x h x l
	Oil Volume of largest tank	**= 20,000 gallons**

Assumptions: Assume containment contains water from 25-year, 24-hour precipitation event. Assume no containment capacity on truck pad.

Calculation: Sketch of Secondary Containment



Attachment F
Secondary Containment Calculations

Kettle Falls Generating Station, Diesel Fuel Tanks-Secondary Containment Calculation

Total Volume of Secondary Containment =	#1	39’ 6” x 14’ 9” x 2’ 5”	=	1,457 ft^3
	#2	Zero due to gap in #1	=	0 ft^3
Volume of Truck Pad =			=	0 ft^3
Total Volume, Secondary Containment Calculation			=	1,457 ft^3
Subtract volume of tank within containment		3,194 gallons (@2.5’)	=	427 ft^3
Subtract volume of 24-hr, 25-yr precipitation		2.2” /12 x (1457 ft^3 /2’5”)	=	107 ft^3
Net containment volume =		923 ft^3	=	6,904 gallons

Conclusion: The secondary containment is not sufficient to contain the entire contents of the 20,000 gallon AST. Modifications will be made to provide the necessary containment capacity.

Attachment F
Secondary Containment Calculations

Kettle Falls Generating Station, Bulk Lube Oil Storage Tank-Secondary Containment Calculation

Total Volume of Secondary Containment	21.5’ x 13’ x 3’	=	839 ft^3
Subtract volume of tank/pad within containment	7’ x 7’ x 3’	=	147 ft^3
Subtract volume of lube oil conditioner/pad	5.5’ x 5.5’ x 3’	=	91 ft^3
Net containment volume =	601 ft^3	=	4,495 gallons
Capacity of Bulk Lube Oil Storage Tank		=	2,800 gallons

Conclusion: The secondary containment is sufficient to contain the entire contents of the lube oil storage tank.

Attachment G

NRCS Soil Survey

Soil Map—Stevens County, Washington
(KFGS Soils)

Soil Map—Stevens County, Washington
(KFGS Soils)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Stevens County, Washington
Survey Area Data: Version 10, Dec 10, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

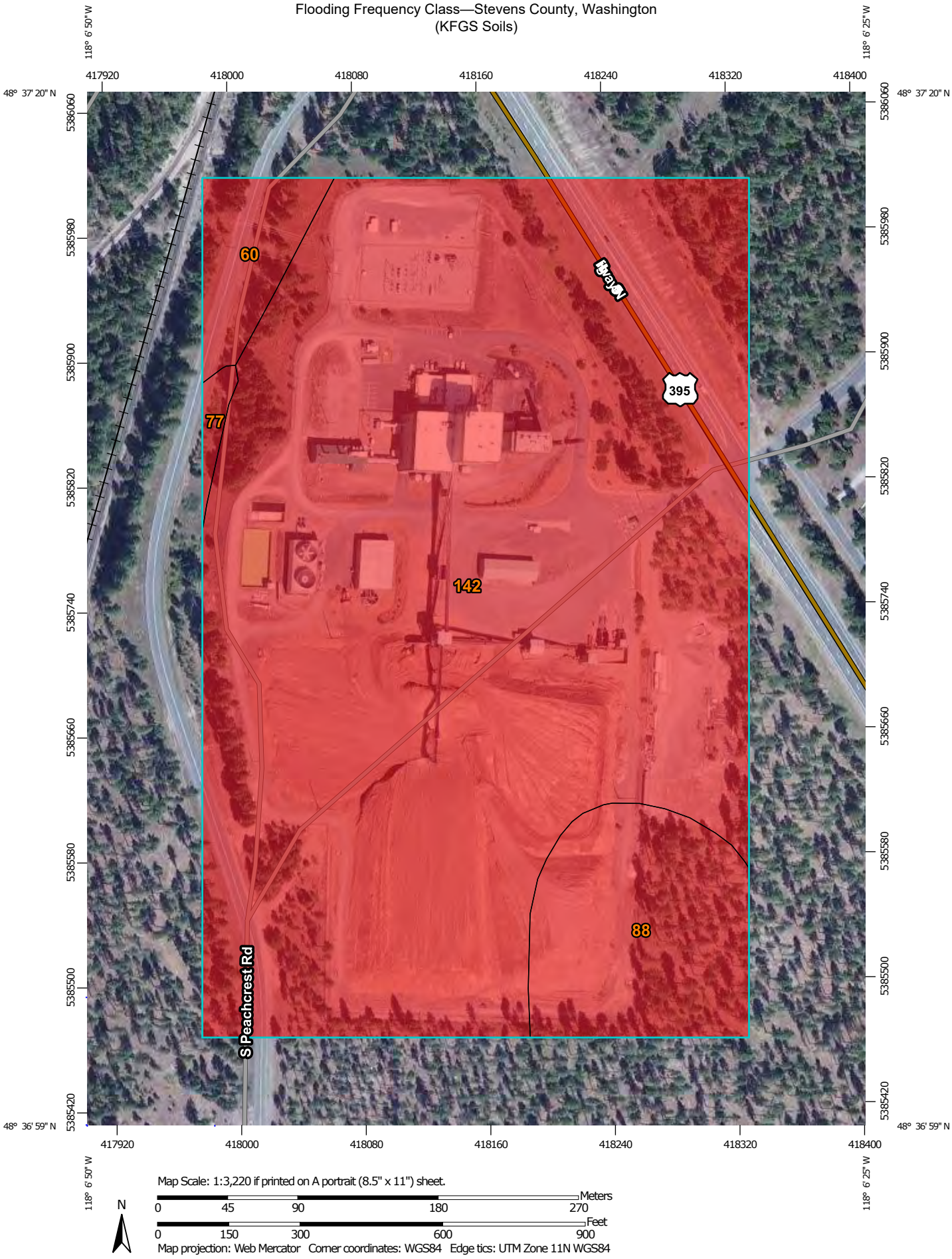
Date(s) aerial images were photographed: Jul 7, 2011—Aug 8, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Stevens County, Washington (WA065)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
60	Dart loamy coarse sand, 0 to 8 percent slopes	1.6	3.4%
77	Donavan-Rock outcrop complex, 30 to 65 percent slopes	0.3	0.6%
88	Hagen sandy loam, 0 to 15 percent slopes	4.7	9.9%
142	Marble loamy sand, 5 to 25 percent slopes	41.3	86.2%
Totals for Area of Interest		**47.9**	**100.0%**

Flooding Frequency Class—Stevens County, Washington
(KFGS Soils)



Flooding Frequency Class—Stevens County, Washington
(KFGS Soils)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- None
- Very Rare
- Rare
- Occasional
- Frequent
- Very Frequent
- Not rated or not available

Soil Rating Lines
- None
- Very Rare
- Rare
- Occasional
- Frequent
- Very Frequent
- Not rated or not available

Soil Rating Points
- None
- Very Rare
- Rare
- Occasional
- Frequent
- Very Frequent
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Stevens County, Washington
Survey Area Data: Version 10, Dec 10, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 7, 2011—Aug 8, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Flooding Frequency Class

Flooding Frequency Class— Summary by Map Unit — Stevens County, Washington (WA065)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
60	Dart loamy coarse sand, 0 to 8 percent slopes	None	1.6	3.4%
77	Donavan-Rock outcrop complex, 30 to 65 percent slopes	None	0.3	0.6%
88	Hagen sandy loam, 0 to 15 percent slopes	None	4.7	9.9%
142	Marble loamy sand, 5 to 25 percent slopes	None	41.3	86.2%
Totals for Area of Interest			**47.9**	**100.0%**

Description

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent.

"None" means that flooding is not probable. The chance of flooding is nearly 0 percent in any year. Flooding occurs less than once in 500 years.

"Very rare" means that flooding is very unlikely but possible under extremely unusual weather conditions. The chance of flooding is less than 1 percent in any year.

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

"Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.

"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.

"Very frequent" means that flooding is likely to occur very often under normal weather conditions. The chance of flooding is more than 50 percent in all months of any year.

Rating Options

Aggregation Method: Dominant Condition

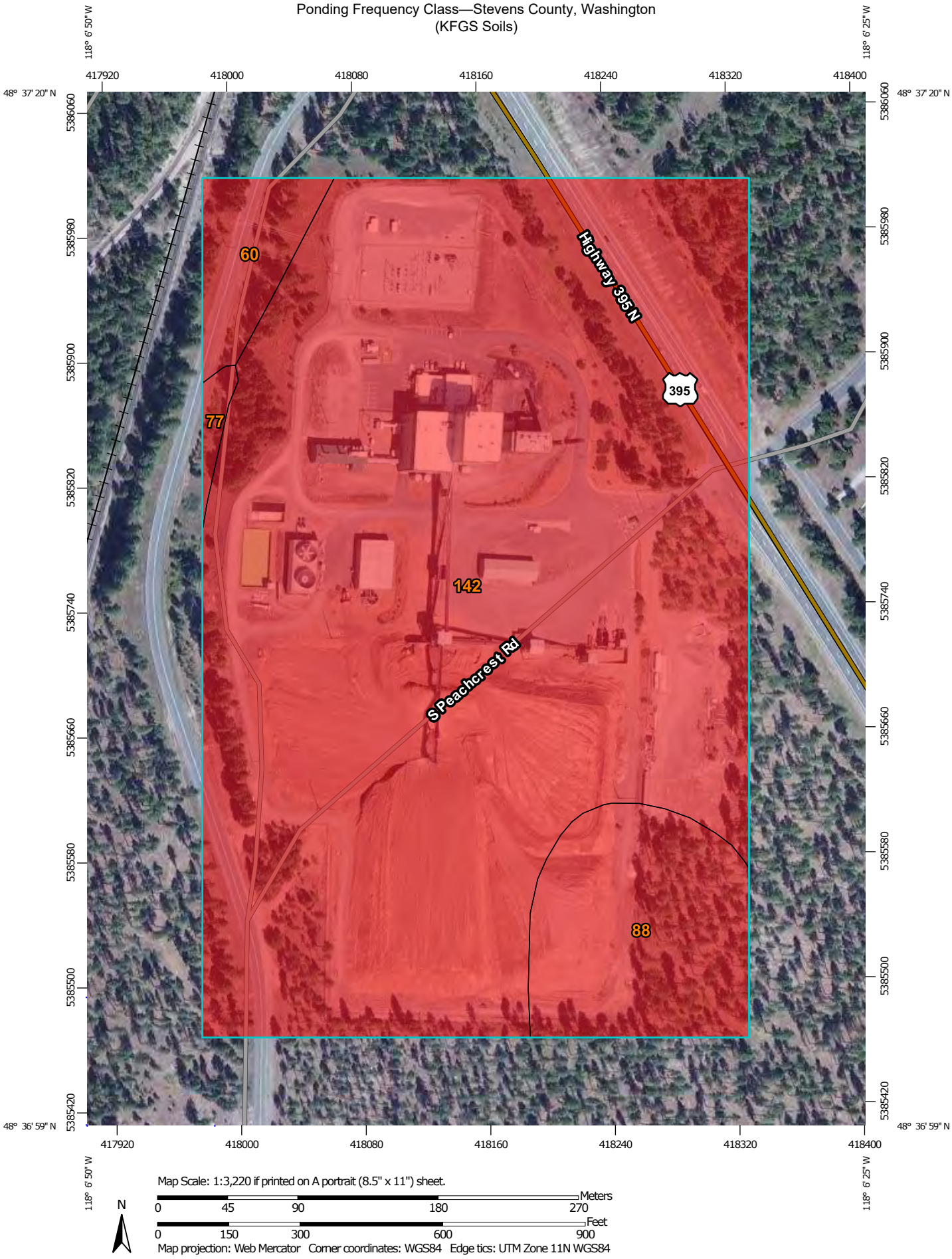
Component Percent Cutoff: *None Specified*

Tie-break Rule: More Frequent

Beginning Month: January

Ending Month: December

Ponding Frequency Class—Stevens County, Washington
(KFGS Soils)



Ponding Frequency Class—Stevens County, Washington
(KFGS Soils)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- None
- Rare
- Occasional
- Frequent
- Not rated or not available

Soil Rating Lines
- None
- Rare
- Occasional
- Frequent
- Not rated or not available

Soil Rating Points
- None
- Rare
- Occasional
- Frequent
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Stevens County, Washington
Survey Area Data: Version 10, Dec 10, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 7, 2011—Aug 8, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Ponding Frequency Class

Ponding Frequency Class— Summary by Map Unit — Stevens County, Washington (WA065)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
60	Dart loamy coarse sand, 0 to 8 percent slopes	None	1.6	3.4%
77	Donavan-Rock outcrop complex, 30 to 65 percent slopes	None	0.3	0.6%
88	Hagen sandy loam, 0 to 15 percent slopes	None	4.7	9.9%
142	Marble loamy sand, 5 to 25 percent slopes	None	41.3	86.2%
Totals for Area of Interest			**47.9**	**100.0%**

Description

Ponding is standing water in a closed depression. The water is removed only by deep percolation, transpiration, or evaporation or by a combination of these processes. Ponding frequency classes are based on the number of times that ponding occurs over a given period. Frequency is expressed as none, rare, occasional, and frequent.

"None" means that ponding is not probable. The chance of ponding is nearly 0 percent in any year.

"Rare" means that ponding is unlikely but possible under unusual weather conditions. The chance of ponding is nearly 0 percent to 5 percent in any year.

"Occasional" means that ponding occurs, on the average, once or less in 2 years. The chance of ponding is 5 to 50 percent in any year.

"Frequent" means that ponding occurs, on the average, more than once in 2 years. The chance of ponding is more than 50 percent in any year.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: More Frequent

Beginning Month: January

Ending Month: December