



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, WA 99205-1295 • 509-329-3400

June 10, 2019

Jason Thackston
Senior Vice President Energy Resources
Avista Corporation
1411 E Mission Avenue / MSC-7
Spokane, WA 99220-3727

RE: Inspection of Wastewater Treatment Facilities, National Pollutant Discharge Elimination System (NPDES) Permit No. WA0045217

Dear Jason Thackston:

I have enclosed the inspection report for my visit to the Kettle Falls Generating Station on March 28, 2019. I wish to thank Darryl Soyars, Kevin Booth, and Merlin Scacco for their assistance during the inspection.

I had a few minor recommendations during the inspection. These included:

1. Report analytical results for the day the sample was collected (rather on the day the analysis was conducted).
2. Clean sampling tubes for the effluent composite sampler.
3. Update the Operations & Maintenance manual to reflect installation of a new flow meter.

I understand that Kettle Falls Generating Station staff has addressed items 1 and 2, and has upcoming plans to update the O&M manual.

Please review the inspection report. If you have any questions, please contact me at (509) 329-3500 or phal461@ecy.wa.gov.

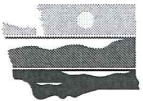
Sincerely,

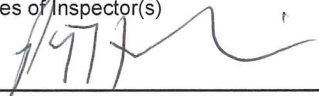

Pat Hallinan
Water Quality Section

PH:red
Enclosures

cc: Kevin Booth, Avista Corporation
Merlin Scacco, Avista Kettle Falls Generating Station



 DEPARTMENT OF ECOLOGY State of Washington		State of Washington Department of Ecology Eastern Regional Office Water Compliance Inspection Report			
Section A: National Data System Coding (i.e., PCS)					
Transaction Code 1 N 2 5	NPDES # 3 WA-0045217 11	yr/mo/day 12 19/03/28 17	Inspection Type 18 C	Inspector 19 S	Fac Type 20 2
Remarks					
21 Avista Corporation, Kettle Falls Generating Station Class I Inspection					66
Inspection Work Days 67 2.0 69	Facility Self-Monitoring Evaluation Rating 70 5	BI 71 N	QA 72 N	Reserved 73 _____ 74 _____ 75 _____ 80	
Section B: Facility Data					
Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) Avista Corporation, Kettle Falls Generating Station 1151 Highway 395 North Kettle Falls, WA 99141			Entry Time/Date		Permit Effective Date
			10:00 AM 3/28/2019		10/01/2013
			Exit Time / Date		Permit Expiration Date
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Merlin Scacco Kettle Falls Generating Station Plant Chemist (509)738-1510 phone, (509)738-2598 fax, Merlin.Scacco@avistacorp.com			Other Facility Data (e.g. SIC NAICS, and other descriptive information) The facility is a wood waste fired steam-electric generating facility. SIC code 4911 (Electric Services) NAICS 221117 (Biomass Electric Power Generation)		
Name, Address of Responsible Official/Title/Phone and Fax Number Jason Thackston, Senior Vice President Energy Resources Avista Corporation 1411 E Mission, MSC-7 Spokane WA 99220-3727 (509) 489-0500 phone, Jason.Thackston@avistacorp.com			Contacted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Section C: Areas Evaluated During Inspection (Check only those areas evaluated)					
<input checked="" type="checkbox"/> Permit	<input checked="" type="checkbox"/> Self-Monitoring Program	<input type="checkbox"/> Pretreatment	<input type="checkbox"/> MS4		
<input checked="" type="checkbox"/> Records/Reports	<input type="checkbox"/> Compliance Schedules	<input type="checkbox"/> Pollution Prevention	<input type="checkbox"/> Other:		
<input checked="" type="checkbox"/> Facility Site Review	<input checked="" type="checkbox"/> Laboratory	<input type="checkbox"/> Stormwater			
<input checked="" type="checkbox"/> Effluent/Receiving Water	<input checked="" type="checkbox"/> Operations & Maintenance	<input type="checkbox"/> Combined Sewer Overflow			
<input checked="" type="checkbox"/> Flow Measurement	<input type="checkbox"/> Sludge Handling/Disposal	<input type="checkbox"/> Sanitary Sewer Overflow			
Section D: Summary of Findings/Comments					
(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)					
SEV Codes		SEV Description			

-See next page for Narrative-					
Name(s) and Signatures of Inspector(s) Pat Hallinan 		Agency/Office/Phone and Fax Numbers Ecology/Eastern Regional Office, (509) 329-3500, (509) 329-3572 fax, phal461@ecy.wa.gov		Date 6/10/2019	
Signature of Management Q A Reviewer Art Jenkins 		Agency/Office/Phone and Fax Numbers Ecology/Eastern Regional Office, (509) 329-3504, (509) 329-3572 fax, ajen461@ecy.wa.gov		Date 6/10/2019	

Water Compliance Inspection Report
Section D. Summary of Findings/Comments (continued)

Permit: The NPDES permit became effective on October 1, 2013, and expired on September 20, 2018. The Permittee submitted a renewal application on September 27, 2017, and an updated application on July 12, 2018. The permit has been administratively extended according to the Administrative Procedures Act, RCW 34.05.422(3). Ecology plans to release a draft permit available for public review later this summer.

The July 2018 updated application incorporated a switch in the source of supply water from the City of Kettle Falls municipal system to three onsite groundwater wells. At the same time, the facility replaced its supply water treatment system from carbon filtration/ion exchange to reverse osmosis/electro-deionization (RO/EDI). This change has resulted in an increase in the frequency of discharges from about two times per week to about six days per week.

The facility discharges treated wastewater to Franklin D. Roosevelt Lake at a maximum rate of about 235 gpm. Wastewater consists of cooling tower blowdown, reverse osmosis reject water, and other low volume wastewaters. The current permit limits the total discharge flow to a maximum of 233,000 gallons per day.

Facility Site Review: The Kettle Falls Generating Station (Generating Station) is a wood-waste fired steam-electric plant that also includes a small gas turbine and a heat recovery system. The Generating Station can generate up to 56.9 Megawatts and burns about 500,000 tons of wood waste annually. The main components of the Generating Station include a fuel delivery system; supply water treatment and wastewater discharge; the combustion boiler and steam turbine; and an exhaust gas cleanup system.

The 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. The retention basin receives settling basin overflows and cooling water blowdown. During typical operation, the Permittee will recirculate water from the retention basin, through the mixing tank, and into the setting basins. The recirculation continues for 6 to 12 hours during which the Permittee monitors temperature, pH, and chlorine. When these parameters meet effluent limits, the flow is diverted from the mixing tank to the outfall line.

Effluent/Receiving Water: The administratively extended permit places limits on flow, pH, TSS, oil & grease, temperature, free chlorine, priority pollutants, and PCBs. In lieu of monitoring for priority pollutants, the permit allows an engineering calculation showing that priority pollutants are not detectable in the final discharge.

The attached table lists a summary of discharge monitoring report (DMR) data collected from January 2016 through February 2019. The Permittee met all permit limits for this time period, and for the term of the administratively extended permit.

In submitting past DMRs, the Permittee typically reported results for TSS and oil & grease on the day the analytical result was conducted, rather than the day of that the sample was collected. For some of these past DMRs, this reporting method resulted in analytical results reported for days where no discharged occurred. For future reporting, recommended that the Permittee report sample results on the DMR for the day of the sampling. The Permittee has confirmed the change in reporting on their March 2019 DMR form.

Flow Measurement: The facility recently replaced its effluent flow meter. Recommended an update to their O&M manual to include the new flow meter and the manufacture's recommended calibration frequency.

Operations and Maintenance: Recommend the cleaning of sampling tubes on the 24-hour composite sampling equipment.

Section D: COMPLETED BY: Pat Hallinan

TITLE: Permit Manager

DATE: 6/3/2019

TELEPHONE: (509) 329-3500

INSTRUCTIONS

Section A: National Data System Coding (*i.e.*, PCS)

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be *new* unless there is an error in the data entered.

Column 3 - 11: NPDES Permit No.: Enter the facility's NPDES permit number – third character in permit number indicates permit type for U=unpermitted, G=general permit, etc. (*Use the Remarks columns to record the State permit number, if necessary.*)

Columns 12 - 17: Inspection Date: Insert the date entry was made into the facility. Use the year/month/day format (e.g., 94/06/30 = June 30, 1994).

Column 18: Inspection Type*: Use one of the codes listed below to describe the type of inspection:

A	Performance Audit	U	IU Inspection with Pretreatment Audit	!	Pretreatment Compliance (Oversight)
B	Compliance Biomonitoring	X	Toxics Inspection	@	Follow-up (enforcement)
C	Compliance Evaluation (non-sampling)	Z	Sludge – Biosolids	{	Stormwater-Construction-Sampling
D	Diagnostic	#	Combined Sewer Overflow-Sampling	}	Stormwater-Construction-Non-Sampling
F	Pretreatment Follow-up	\$	Combined Sewer Overflow-Non-Sampling	:	Stormwater-Non-Construction-Sampling
G	Pretreatment (Audit)	+	Sanitary Sewer Overflow-Sampling	~	Stormwater-Non-Construction-Non-Sampling
I	Industrial User (IU) Inspection	&	Sanitary Sewer Overflow-Non-Sampling	<	Stormwater-MS4-Sampling
M	Multimedia	\	CAFO-Sampling	-	Stormwater-MS4-Non-Sampling
N	Spill	=	CAFO-Non-Sampling	>	Stormwater-MS4-Audit
O	Compliance Evaluation (Oversight)	2	IU Sampling Inspection		
P	Pretreatment Compliance Inspection	3	IU Non-Sampling Inspection		
R	Reconnaissance	4	IU Toxics Inspections		
S	Compliance Sampling	5	IU Sampling Inspection With Pretreatment		
		6	IU Non-Sampling Inspection with Pretreatment		
		7	IU Toxics With Pretreatment		

Column 19: Inspector Code: Use one of the codes listed below to describe the *lead agency* in the inspection

A - State (Contractor)	O - Other Inspectors, Federal/EPA (Specify in Remarks columns)
B - EPA (Contractor)	P - Other Inspectors, State (Specify in Remarks columns)
E - Corps of Engineers	R - EPA Regional Inspector
J - Joint EPA/State Inspectors-EPA Lead	S - State Inspector
L - Local Health Department (State)	T - Joint State/EPA Inspectors-State Lead
N - NEIC Inspectors	

Column 20: Facility Type: Use one of the codes below to describe the facility.

1 - Municipal. Publicly Owned Treatment Works (POTWs) with 1987 Standard Industrial Code (SIC) 4952.

2 - Industrial. Other than municipal, agricultural, and Federal facilities.

3 - Agricultural. Facilities classified with 1987 SIC 0111 to 0971.

4 - Federal. Facilities identified as Federal by the EPA Regional Office.

5 - Oil & Gas. Facilities classified with 1987 SIC 1311 to 1389

Columns 21-66: Remarks: These columns are reserved for remarks at the discretion of the Region.

Columns 67-69: Inspection Work Days: Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort participating inspectors; any effort for laboratory analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed documentation.

Column 70: Facility Evaluation Rating: Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information: Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection: Enter Q if the inspection was conducted as follow-up on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory except for "Other Facility Data," which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, and other updates to the record).

Section C: Areas Evaluated During Inspection

Check only those areas evaluated by marking the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary, in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

*Footnote: In addition to the inspection types listed above under column 18, a state may continue to use the following wet weather and CAFO inspection types until the state is brought into ICIS-NPDES: K-CAFO, V-SSO, Y-COS, W-Stormwater, 9-MS4. States may also use the new wet weather CAFO and MS4 inspection types show in column 19 of this form. The EPA regions are required to use the new wet weather CAFO and MS4 inspection types for inspections with an inspection date (DTIN) on or after July 1, 2005.

Attachment - Single Event Violation Table - Codes and Descriptions*

CODE	DESCRIPTION
Effluent Violations	
A0018	Approved Bypass
A0013	Failed Toxicity Test
A0023	Industrial Spill
A0017	Inspection sample above historic DMR range
A0022	Narrative Effluent Violation
A0012	Numeric effluent violation
A0016	Reported Fish Kill
A0011	Unapproved Bypass
A0015	Unauthorized Discharge of Brine
Management Practice Violations	
B0019	Best Management Practice Deficiencies
B0024	Biosolids/Sewage Sludge Violation (Part 503)
B0026	Failure to Allow Entry
B0012	Failure to Conduct Inspections
B0027	Failure to Develop Adequate SPCC Plan
B0017	Failure to develop any or adequate SWPPP/SWMP
B0011	Failure to Develop/Enforce Standards
B0028	Failure to Implement SPCC Plan
B0018	Failure to Implement SWPPP/SWMP
B0041	Failure to Maintain Records
B0040	Improper Chemical Handling
B0023	Improper Land Application (non-503, non-CAFO)
B0020	Improper Operation and Maintenance
B0025	Inflow/Infiltration (I/I)
B0021	Laboratory Not Certified
B0022	No Licensed/Certified Operator
B0042	Violation of a milestone in an order
Monitoring Violations	
C0017	Analysis not Conducted
C0011	Failure to Monitor for non-Toxicity Requirements

CODE	DESCRIPTION
CSO	
A0C18	Approved Bypass
A0024	Dry weather overflow
B0030	Failure to Develop Adequate LTCP
B0031	Failure to Implement LTCP
B0029	Failure to Implement Nine Minimum Controls (NMCs)
BC291	Failure to implement required NMC #1(Proper operation and maintenance)
BC292	Failure to implement required NMC #2 (Maximum use of the collection system)
BC293	Failure to implement required NMC #3 (Review pretreatment requirements)
BC294	Failure to implement required NMC #4 (Maximization of flow)
BC295	Failure to implement required NMC #5 (Elimination of dry weather flow)
BC296	Failure to implement required NMC #6 (Control of solids)
BC297	Failure to implement required NMC #7 (Pollution prevention programs)
BC298	Failure to implement required NMC #8 (Public notification)
BC299	Failure to implement required NMC #9 (Monitoring)
B0C41	Failure to Maintain Records or Meet Record Keeping Requirements
C0C11	Failure to monitor
E0C16	Failure to submit required report (non-DMR)
E0C13	Improper/Incorrect reporting
B0044	LTCP implementation schedule milestone missed
A0C22	Narrative effluent violation
E0C14	Noncompliance with section 308 Information Request
A0C12	Numeric effluent violation
A0C11	Related Unapproved Bypass
A0021	Unauthorized CSO Discharge to Waters/Wet Weather
A0025	Unauthorized overflow to dry land or building backup
B0045	Violation of a milestone in a permit
B0C42	Violation of a milestone in an order
SSO	
A0S18	Approved Bypass
A0020	Discharge to Waters

CODE	DESCRIPTION
C0021	Failure to Monitor for Toxicity Requirements
C0015	Frequency of Sampling Violation
C0018	Improper Analysis or Lab Error
C0014	Invalid/Unrepresentative Sample
C0016	No Flow Measurement Device
Permitting Violations	
D0014	Application Incomplete
D0011	Discharge Without a Valid Permit
D0012	Failure to Apply for a Permit
D0015	Failure to Pay Fees
D0016	Failure to Submit Timely Permit Renewal Application
D0013	Unapproved Operation
D0017	Violation Specified in Comment

Reporting Violations	
E0017	Failure to Notify
E0012	Failure to Submit DMRs
E0016	Failure to submit required report (non-DMR, non-pretreatment)
E0013	Improper/ Incorrect Reporting
E0011	Late Submittal of DMRs
E0014	Noncompliance with Section 308 Information Request
Pretreatment	
C0012	Baseline Monitoring Report Violation
B0P12	Failure to Conduct Inspections
B0P11	Failure to Develop/Enforce Standards
B0013	Failure to Enforce Against I/U
B0015	Failure to Establish Local Limits
C0013	Failure to Establish Self-Monitoring Requirements
B0014	Failure to Issue SIU Permits
B0016	Failure to Meet Inspection and Sampling Plan for SIUs
E0015	Failure to submit required report (non-DMR)
B0P40	Improper Chemical Handling

CODE	DESCRIPTION
D0S11	Discharge without a valid permit (includes satellite systems)
B0S41	Failure to Maintain Records or Meet Record Keeping Requirements
C0S11	Failure to monitor
E0018	Failure to report other violation
E0019	Failure to report violation that may endanger public health 122.41(l)(7)
D0S12	Failure to submit required permit application info (includes satellite systems)
B0S20	Improper Operation and Maintenance
A0S22	Narrative effluent violation
E0S14	Noncompliance with section 308 Information Request
A0S12	Numeric effluent violation
A0026	Overflow to Dry Land or Building Backup
A0S11	Related Unapproved Bypass
BS42A	Violation of milestone in an administrative order
BS42J	Violation of milestone in judicial decree
B0046	Violation of sewer moratorium or restriction
Stormwater Construction	
D0R11	Discharge without a permit
D0R18	Failure to apply for a notice of termination
B0R12	Failure to Conduct Inspections
B0C17	Failure to develop any or adequate SWPPP/SWMP
B0C18	Failure to Implement SWPPP/SWMP
B0R41	Failure to Maintain Records
C0R11	Failure to Monitor
BR19A	Failure to properly install/implement BMPs
BR19B	Failure to properly operate and maintain BMPs
D0R12	Failure to submit required permit application information
E0R16	Failure to submit required report (non-DMR)
A0R22	Narrative effluent violation
E0R14	Noncompliance with section 308 Information Request
A0R12	Numeric Effluent Violation
B0R42	Violation of a milestone in an order
Stormwater MS4	
D0M11	Discharge without a permit

CODE	DESCRIPTION
A0014	IU Violation of Pretreatment Standards
CAFO	
B0A19	Best Management Practice Deficiencies
B0038	Direct Animal Contact with Waters of US
D0A11	Discharge without a permit
B0A12	Failure to Conduct Inspections
B0032	Failure to Develop any or adequate NMP
B0033	Failure to Implement NMP
B0A41	Failure to Maintain Records or Meet Record Keeping Requirements
B0043	Failure to meet order final compliance date
C0A11	Failure to Monitor
D0A12	Failure to submit required permit application information
C0019	Failure to Test Manure
B0A40	Improper Chemical Handling
B0A23	Improper Land Application
B0039	Improper Manure Handling (not including land application)
B0037	Improper Mortality Management
B0036	Improper O&M of Storage Facility
E0A13	Improper/Incorrect reporting
B0034	Insufficient Buffers/Setbacks
B0035	Insufficient Storage Capacity
A0A22	Narrative effluent violation
E0A16	No Annual Report Submitted
C0020	No Depth Marker
E0A14	Noncompliance with section 308 Information Request
A0A12	Numeric effluent violation
A0019	Production Area Runoff
B0A42	Violation of a milestone in an order

CODE	DESCRIPTION
D0M18	Failure to apply for a notice of termination
B0M12	Failure to Conduct Inspections
B0M17	Failure to develop any or adequate SWPPP/SWMP
B0M18	Failure to Implement SWPPP/SWMP
B0M41	Failure to Maintain Records or Meet Record Keeping
C0M11	Failure to Monitor
BM19A	Failure to properly install/implement BMPs
BM19B	Failure to properly operate and maintain BMPs
D0M12	Failure to submit required permit application information
E0M16	Failure to submit required report (non-DMR)
A0M22	Narrative effluent violation
E0M14	Noncompliance with section 308 Information Request
A0M12	Numeric Effluent Violation
B0M42	Violation of a milestone in an order
Stormwater Non-Construction	
D0N11	Discharge without a permit
D0N18	Failure to apply for a notice of termination
B0N12	Failure to Conduct Inspections
B0N17	Failure to develop any or adequate SWPPP/SWMP
B0N18	Failure to Implement SWPPP/SWMP
B0N41	Failure to Maintain Records
C0N11	Failure to Monitor
BN19A	Failure to properly install/implement BMPs
BN19B	Failure to properly operate and maintain BMPs
D0N12	Failure to submit required permit application information
E0N16	Failure to submit required report (non-DMR)
A0N22	Narrative effluent violation
E0N14	Noncompliance with section 308 Information Request
A0N12	Numeric Effluent Violation
B0N42	Violation of a milestone in an order

* N. B. The codes and code names listed herein may change over time. Please consult ICIS-NPDES and PCS system documentation for updated lists.

Water Quality Photolog

Facility: Avista Corporation, Kettle Falls Generating Station

Location: Kettle Falls

Permit No.: WA0045217

Date Photos Taken: March 28, 2019

Photographer: Pat Hallinan



Photo 1: Wood chip conveyor into building.

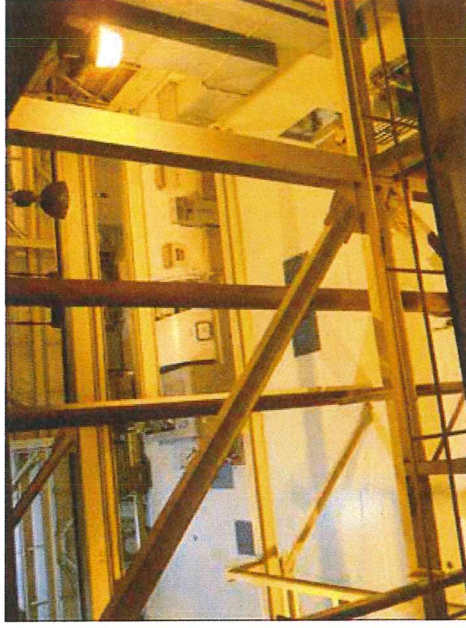


Photo 2: Steam turbine and generator unit.



Photo 3: Boiler viewing window, looking onto the traveling bottom grate of boiler.

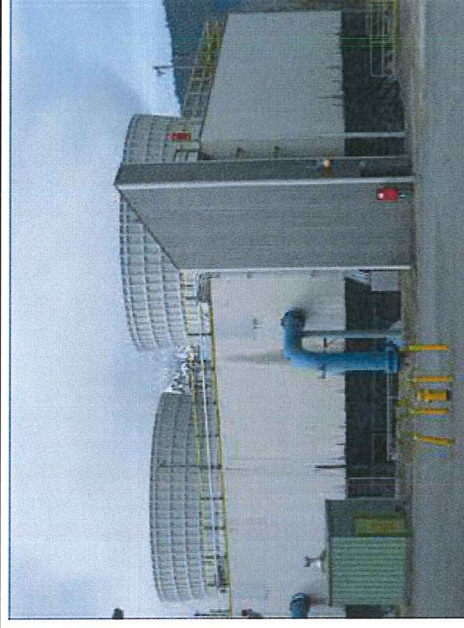


Photo 4: Cooling towers.

Water Quality Photolog

Facility: Avista Corporation, Kettle Falls Generating Station

Location: Kettle Falls

Permit No.: WA0045217

Date Photos Taken: March 28, 2019

Photographer: Pat Hallinan



Photo 5: Reverse osmosis units used to treat incoming supply water.

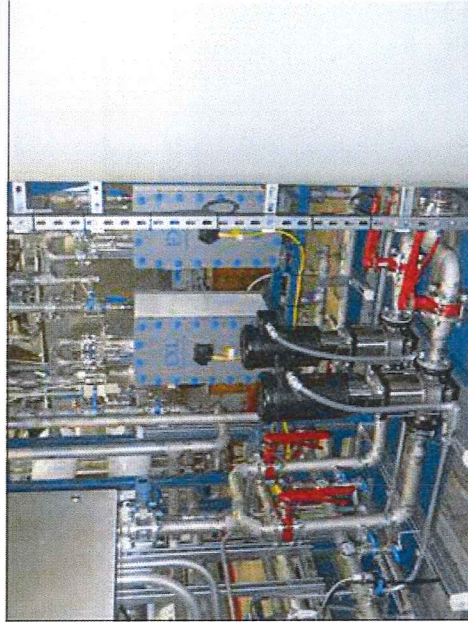


Photo 6: Electro-deionizing (EDI) units in supply water treatment system.

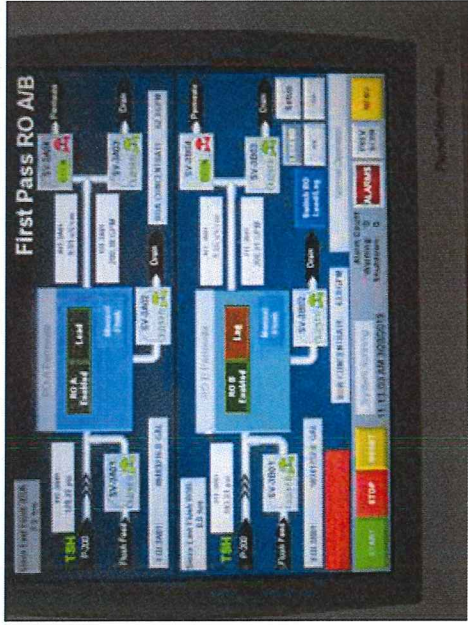


Photo 7: Control panel for supply water treatment system.



Photo 8: Close-up of electro-deionization (EDI) unit.

Water Quality Photolog

Facility: Avista Corporation, Kettle Falls Generating Station

Location: Kettle Falls

Permit No.: WA0045217

Date Photos Taken: March 28, 2019

Photographer: Pat Hallinan



Photo 9: Automatic effluent residual chlorine analyzer.

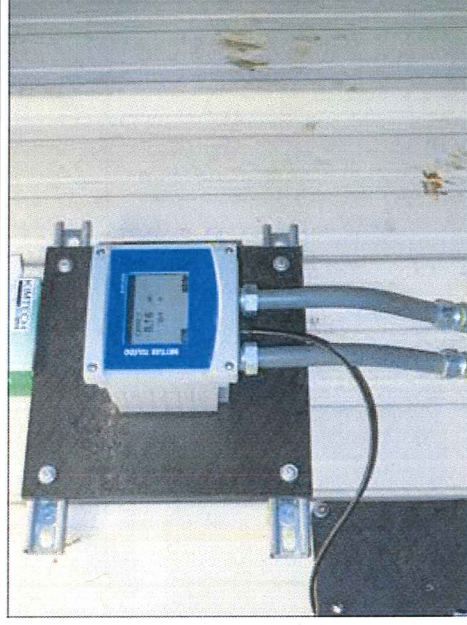


Photo 10: Effluent pH output panel.



Photo 11: Effluent composite sampler and intake line.

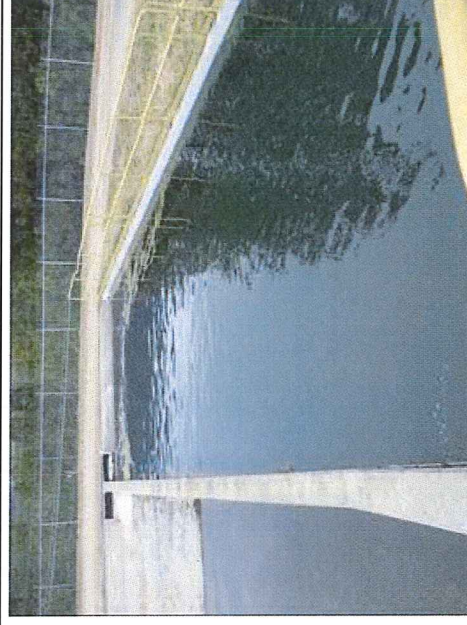


Photo 12: Settling based in effluent treatment system.

Water Quality Photolog

Facility: Avista Corporation, Kettle Falls Generating Station

Location: Kettle Falls

Permit No.: WA0045217

Date Photos Taken: March 28, 2019

Photographer: Pat Hallinan



Photo 13: Settling basin in effluent treatment system. During normal operation the generating station only uses one of two basins.

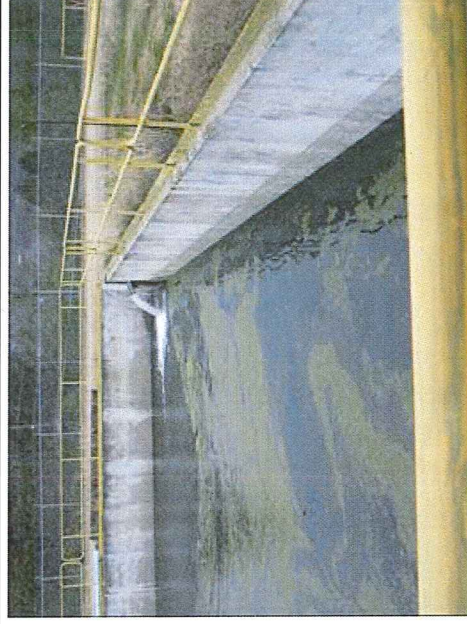


Photo 14: Effluent retention basin.



Photo 15: Effluent retention basin. From this basin, pumps transfer the water into the effluent discharge line.

Discharge Monitoring Report Summary - Avista Kettle Falls Generating Station, January 2016 to February 2019

Parameter	Units	# of Samples	DMR Data			Permit Limits	
			Minimum	Average	Maximum	Minimum	Maximum
Flow	gpd	967	-	203,470	232,060	-	233,000
pH	su	967	6.0	-	8.9	6.0	9.0
TSS	mg/L	37	-	2.8	12	-	30
Oil and Grease	mg/L	35	-	0.6	2.2	-	9.1
Temperature	°F	967	-	66.5	87	-	90
Chlorine, Free	mg/L	956	-	0.024	0.13	-	0.2
PCBs	ug/L	3	<0.2	-	<0.5	No discharge	

