POTENTIAL ACTION ITEM

Washington State
Energy Facility Site Evaluation Council

REVISED AGENDA

MONTHLY MEETING
Wednesday May 17, 2023
1:30 PM

VIRTUAL MEETING ONLY
Click here to join the meeting
Conference number: (253) 372-2181 ID: 56502492#

1. Call to Order ……Kathleen Drew, EFSEC Chair

2. Roll Call ……Andrea Grantham, EFSEC Staff

3. Proposed Agenda ……Kathleen Drew, EFSEC Chair

4. Minutes **Meeting Minutes**.....Kathleen Drew, EFSEC Chair

- April 19, 2023 Monthly Meeting Minutes
- April 25, 2023 Carriger Solar Informational Meeting Minutes

5. Projects

a. Kittitas Valley Wind Project

- Operational Updates……Eric Melbardis, EDP Renewables

b. Wild Horse Wind Power Project

- Operational Updates……Jennifer Galbraith, Puget Sound Energy

c. Chehalis Generation Facility

- Operational Updates……Michael Adams, Chehalis Generation

d. Grays Harbor Energy Center

- Operational Updates……Chris Sherin, Grays Harbor Energy

e. Columbia Generating Station

- Operational Updates……Felicia Najera-Paxton, Energy Northwest
- NPDES Permit…… Amy Moon, EFSEC Staff

The Council may consider taking FINAL ACTION on the NPDES Permit for the Columbia Generating Station.

f. WNP – 1/4

- Non-Operational Updates……Felicia Najera-Paxton, Energy Northwest

g. Columbia Solar

- Operational Updates…… Thomas Cushing, Greenbacker Capital

h. Desert Claim

- Amendment Update……Amy Moon, EFSEC Staff

i. Horse Heaven Wind Farm

- Project Updates……Amy Moon, EFSEC Staff
- Adjudication Update……Ami Hafkemeyer, EFSEC Staff

j. Goose Prairie Solar

- Project Updates……Sara Randolph, EFSEC Staff

k. Badger Mountain

- Project Updates……Joanne Snarski, EFSEC Staff

l. High Top & Ostrea

- Project Updates……Sara Randolph, EFSEC Staff

m. Wautoma Solar

- Project Updates……Lance Caputo, EFSEC Staff

n. Hop Hill Solar

- Project Updates……John Barnes, EFSEC Staff

o. Carriger Solar

- Project Updates……Joanne Snarski, EFSEC Staff

6. Adjourn……Kathleen Drew, EFSEC Chair

Note: "FINAL ACTION" means a collective positive or negative decision, or an actual vote by a majority of the members of a governing body when sitting as a body or entity, upon a motion, proposal, resolution, order, or ordinance. RCW 42.30.020

WASHINGTON STATE

ENERGY FACILITY SITE EVALUATION COUNCIL

MONTHLY MEETING

April 19, 2023

Conducted Remotely via Microsoft Teams

Reporter: John M.S. Botelho, CCR, RPR

EFSEC 2023 Monthly Council Meetings
April, - April 19, 2023

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APPEARANCES

(All parties appearing remotely.)

STATE AGENCY MEMBERS:
Kathleen Drew, Chair
Kate Kelly, Department of Commerce
Eli Levitt, Department of Ecology
Mike Livingston, Department of Fish and Wildlife
Lenny Young, Department of Natural Resources
Stacey Brewster, Utilities & Transportation Comm.

LOCAL GOVERNMENT AND OPTIONAL STATE AGENCIES:

Horse Heaven:

Derek Sandison, Department of Agriculture

Ed Brost, Benton County

Badger Mountain:

Jordyn Guilio, Douglas County

Wautoma Solar:

Dave Sharp, Benton County

Paul Gonseth, Wash. Dept. of Transportation

ASSISTANT ATTORNEYS GENERAL:
Jon Thompson
Jenna Slocum

APPEARANCES (Continuing)

ADMINISTRATIVE LAW JUDGES:
Adam Torem
Laura Bradley
Dan Gerard
Micah Larripa

COUNCIL STAFF:

Sonia Bumpus
Ami Hafkemeyer
Amy Moon
Stew Henderson
Joan Owens
Andrea Grantham
Dave Walker
Sonja Skavland
Lisa Masengale
Sara Randolf
Sean Greene
Lance Caputo
John Barnes
Osta Davis
Joanne Snarski
Alex Shiley

OPERATIONAL UPDATES:
Eric Melbardis
Kittitas Valley Wind, EDP Renewables

Jennifer Galbraith
Wild Horse Wind Power Project, Puget Sound Energy
Chris Sherin
Grays Harbor Energy Center, Grays Harbor Energy

Michael Adams
Chehalis Generation Facility, PacifiCorp
Felicia Najera-Paxton
Columbia Generating Station & WNP-1/4, Energy Northwest
Thomas Cushing
Columbia Solar, Tuusso Energy

APPEARANCES (Continuing)

COUNSEL FOR THE ENVIRONMENT:
Sarah Reyneveld

MEETING INDEX

MEETING INDEX (Continued)

BE IT REMEMBERED that on Wednesday, April 19, 2023, at 1:31 p.m. Pacific time, the following Monthly Meeting of the Washington State Energy Facility Site Evaluation Council was held virtually via Microsoft Teams, to wit:

<<<<<< >>>>>>

CHAIR DREW: Good afternoon. This is Kathleen Drew, Chair of the Energy Facility Site Evaluation Council, calling our April meeting to order.

Ms. Grantham, will you call the roll.

MS. GRANTHAM: Certainly.

Department of Commerce.

MS. KELLY: Kate Kelly, present.

MS. GRANTHAM: Department of Fish and Wildlife.

MR. LIVINGSTON: Mike Livingston, present.

MS. GRANTHAM: Department of Ecology.

MR. LEVITT: Eli Levitt, present.

MS. GRANTHAM: Department of Natural Resources.

MR. YOUNG: Lenny Young, present.

MS. GRANTHAM: Utilities & Transportation Commission.

MS. BREWSTER: Stacey Brewster, present.

MS. GRANTHAM: Local government and optional State agencies.

For the Horse Heaven project: Department of Agriculture, Derek Sandison.

MR. SANDISON: Present.

MS. GRANTHAM: For Benton County, Ed Brost.

MR. BROST: Present.

MS. GRANTHAM: For the Badger Mountain project: For Douglas County.

MS. GUILIO: Jordyn Guilio, present.

MS. GRANTHAM: For the Wautoma Solar Project: Benton County, Dave Sharp.

MR. SHARP: Dave Sharp, present.

MS. GRANTHAM: For the Washington State Department of Transportation.

MR. GONSETH: Paul Gonseth, present.

MS. GRANTHAM: For the Hop Hill

Solar Project: For Benton County, Paul Krupin.

The assistant attorney generals: Jon Thompson.

MR. THOMPSON: Present.

MS. GRANTHAM: Jenna Slocum.

MS. SLOCUM: Present.

MS. GRANTHAM: For our administrative law judges: Adam Torem.

ALJ TOREM: Yes, here.

MS. GRANTHAM: Laura Bradley.

ALJ BRADLEY: Present.

MS. GRANTHAM: Dan Gerard.

ALJ GERARD: Present.

MS. GRANTHAM: Micah Laparia (phonetic), or Larripa. Excuse me.

ALJ LARRIPA: Micah Larripa. And I'm present.

MS. GRANTHAM: Thank you.

For EFSEC staff: Sonia Bumpus.

CHAIR DREW: Just one second, Ms. Grantham. I think you missed the Carriger Solar project --

MS. GRANTHAM: Oh.

CHAIR DREW: -- community member.

MS. GRANTHAM: You are correct. I have not added that to my list for -- thank you,

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Chair Drew.
So I have for the Carriger Solar project, and we have Matt Chiles, I believe? "Chiles"?
Hearing none.
Okay. I will go back to EFSEC staff.
Sonia Bumpus.
Ami Hafkemeyer.
MS. HAFKEMEYER: Present.
UNIDENTIFIED SPEAKER: I'm sorry. I can't hear the meeting, 'cause -- do you have your sound on? This is a guest.
MS. GRANTHAM: Yes, we have our sound on.
Ami Hafkemeyer.
MS. HAFKEMEYER: Present.
MS. GRANTHAM: Amy Moon.
MS. MOON: Amy Moon, present.
MS. GRANTHAM: Stew Henderson.
MR. HENDERSON: Here.
MS. GRANTHAM: Joan Owens.
MS. OWENS: Present.
MS. GRANTHAM: Dave Walker.
MR. WALKER: Dave Walker's here.
MS. GRANTHAM: Sonja Skavland.
MS. SKAVLAND: Present.

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MS. GRANTHAM: Lisa Masengale.
MS. MASENGALE: Lisa Masengale, present.
MS. GRANTHAM: Sara Randolf.
MS. RANDOLF: Present.
MS. GRANTHAM: Sean Greene.
MR. GREENE: Sean Greene, present.
MS. GRANTHAM: Lance Caputo.
MR. CAPUTO: Lance Caputo, present.
MS. GRANTHAM: John Barnes.
MR. BARNES: John Barnes is present.
MS. GRANTHAM: Osta Davis.
MS. DAVIS: Present.
MS. GRANTHAM: Joanne Snarski.
MS. SNARSKI: Present.
MS. GRANTHAM: Alex Shiley.
MS. SHILEY: Present.
MS. GRANTHAM: For the operational updates: Kittitas Valley wind project.
MR. MELBARDIS: Eric Melbardis, present.
MS. GRANTHAM: Wild Horse wind power project.
MS. GALBRAITH: Jennifer Galbraith,

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present.
MS. GRANTHAM: Grays Harbor Energy Center.
Chehalis Generation Facility.
MR. ADAMS: Mike Adams, present.
MS. GRANTHAM: Columbia Generating Station.
MS. NAJERA-PAXTON: Sorry.
MS. GRANTHAM: Well --
MS. NAJERA-PAXTON: Felic- --
MS. GRANTHAM: Oh.
MS. NAJERA-PAXTON: Sorry. I'm here. Felicia Najera-Paxton, present.
MS. GRANTHAM: Thank you, Felicia.
For Columbia Solar.
MR. CUSHING: Thomas Cushing, present.
MS. GRANTHAM: And do we have someone for the counsel for the environment?
MS. REYNEVELD: Sarah Reyneveld, present.
MS. GRANTHAM: Thank you.
Chair, there is a quorum for the regular council, Horse Heaven council, Badger Mountain council, and Wautoma Solar council. Thank you.

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CHAIR DREW: And for the Carriger Solar project too, our new one.
MS. GRANTHAM: I don't believe Matt said he was present for Carriger Solar.
CHAIR DREW: We still have a quorum. Thanks.
MS. GRANTHAM: Okay. Thank you.
CHAIR DREW: With that, we'll move on to our proposed agenda.
Council members, you have received the proposed agenda. Is there a motion to adopt the proposed agenda?
MR. YOUNG: Lenny Young. So moved.
CHAIR DREW: Second?
MS. BREWSTER: Stacey Brewster. Second.
CHAIR DREW: All those in favor, say "aye."
MULTIPLE SPEAKERS: Aye.
CHAIR DREW: Opposed?
Motion carries.
Moving on to the minutes.
We'll start with the February 23rd -- correction to the agenda -- 2033 [sic] Hop Hill informational meeting minutes. My version, which might be an old

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one, says "3033." So let's correct that on the agenda.
And is there a motion to approve the minutes for the Hop Hill -- this first one is a Hop Hill informational meeting. A motion to approve so we can provide any comments?
MS. KELLY: Kate Kelly. Motion to approve the Hop Hill informational meeting minutes.
CHAIR DREW: Thank you.
Is there a second?
MS. BREWSTER: Stacey Brewster. Second.
CHAIR DREW: Thank you.
I have a few changes. Page 12, Line 15, instead of "Hope," it should say "Hop."
On Page 29, Line 6, the word p-r-a-y should be p-r-e-y.
Page 29, Line 20, the word "exciting" should be "EFSEC siting," s-i-t-i-n-g.
Are there any other corrections?
Okay. Hearing none.
All those in favor of approving the minutes of the February 23rd informational public meeting as amended, please say "aye."
MULTIPLE SPEAKERS: Aye.

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CHAIR DREW: Opposed?
Motion is approved.
Moving on to the February 23rd, 2023, Hop Hill land-use hearing minutes. Is there a motion to approve the minutes?
MS. KELLY: Kate Kelly. Motion to approve the Hop Hill land-use consistency hearing minutes.
CHAIR DREW: Thank you.
Second?
MR. LEVITT: Eli Levitt. Second.
CHAIR DREW: Thanks.
I have just one change. Page 8, Line 1, the word c-i-t-i-n-g should be s-i-t-i-n-g.
Are there any other changes?
Hearing none.
All those in favor of the -- of approving the Hop Hill land-use meeting minutes as amended, please say "aye."
MULTIPLE SPEAKERS: Aye.
CHAIR DREW: Opposed?
Motion carries.
Moving on to the March 15th, 2023, monthly minutes -- monthly meeting minutes.
Is there a motion to approve those minutes?

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MR. LIVINGSTON: Mike Livingston. So moved.
CHAIR DREW: Thank you.
Second?
MR. YOUNG: Lenny Young. Second.
CHAIR DREW: Thanks.
I have no changes.
Does anyone else have any changes to the March 15th, 2023, monthly meeting minutes?
Hearing none.
All those in favor of approving those minutes, please say "aye."
MULTIPLE SPEAKERS: Aye.
CHAIR DREW: Opposed?
Motion carries. Great.
Back over to our operating -- operational updates. First up, Kittitas Valley wind project. Mr. Melbardis.
MR. MELBARDIS: Good afternoon, Chair Drew, EFSEC staff, council members. This -- for the record, this is Eric Melbardis with EDP Renewables for the Kittitas Valley wind power project.
Operations are all smooth and routine here with nothing to report.

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CHAIR DREW: Thank you.
Next, we have Wild Horse wind power project. Ms. Galbraith.
MS. GALBRAITH: Yes. Thank you, Chair Drew, council members, and staff. This is Jennifer Galbraith with Puget Sound Energy representing the Wild Horse wind facility.
And I have no nonroutine updates for the month of March.
CHAIR DREW: Thank you.
Chehalis Generation Facility. Mr. Adams.
MR. ADAMS: Yeah. Hi. Good afternoon, Chair Drew, EFSEC council and staff. For the record, this is Mike Adams, plant manager, Chehalis Generation Facility.
For the month of March, we have no nonroutine updates.
CHAIR DREW: Thank you.
Moving on to the Grays Harbor Energy Center.
Is Mr. Sherin on the line?
MR. SHERIN: Yes, Chair Drew, I am.
CHAIR DREW: Okay. Thank you.
MR. SHERIN: Good afternoon, Chair Drew, council members, and EFSEC staff. This is Chris Sherin, the plant manager at Grays Harbor

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Energy Center.
And for the month of March, we had no nonroutine items to report.
CHAIR DREW: Okay. Thank you.
Moving on to Columbia Generating Station. Operational updates.
MS. NAJERA-PAXTON: Good afternoon --
CHAIR DREW: I think I heard --
MS. NAJERA-PAXTON: -- Chairman Drew.
CHAIR DREW: -- Felicia was here. Yes.
MS. NAJERA-PAXTON: Yes.
CHAIR DREW: Go ahead.
MS. NAJERA-PAXTON: Good afternoon, Chairman Drew and EFSEC council.
For Columbia Generating Station, and March was operational, normal operations. But for upcoming month of May, we have what we call refueling outage, or R26, scheduled to commence May -- May 5th. It'll be a 35-day outage, hopefully.
For this work, we bring in approximately 1200 skilled workers from throughout the country and from here locally to join our forces, roughly doubling our forces on-site for refueling and maintenance

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projects. These include the refueling outage. High level of equipment reliability is maintained throughout this work. And we replace all -- let me see -- 248 of 764 fuel assemblies within our core and do other preventive maintenance work that's required while the reactor is off-line. Thank you.
CHAIR DREW: Thank you.
Are there any questions from council members?
Okay. Thank you.
Moving on to Columbia Solar. Project update. Mr. Cushing -- Cushing.
MR. CUSHING: Good afternoon, Chair Drew, EFSEC staff. This is Thomas Cushing, asset manager for the Columbia Solar Project.
For the month of March, we have no nonroutine updates for the systems.
CHAIR DREW: That's great. And everything is operational. That's terrific news. Thank you.
MR. CUSHING: Thank you.
CHAIR DREW: Moving on to Horse Heaven Wind Farm. Ms. Moon.
MS. MOON: Good afternoon, Council Chair Drew and EFSEC council members. For the record, to restate, this is Amy Moon, an EFSEC staff

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member, providing an update on the Horse Heaven wind project.
EFSEC staff continue to coordinate with our consultant, WSP, on the preparation of the final environmental impact statement, or final EIS. This includes submitting a data request to the applicant on March 22nd of 2023 for additional information as a result of the draft EIS public and agency comments that were received during the comment period.
The data request was for additional information pertaining to air, water, vegetation, habitat, cultural, visual, noise, recreation, and transportation. EFSEC staff also continue to actively engage with Washington State agencies regarding potential impact analysis and mitigation opportunities.
Does the council have any questions?
CHAIR DREW: Are there questions from council members?
Thank you. We'll continue to keep in touch with you on that.
Moving on to the Goose Prairie Solar project update. Ms. Randolf.
MS. RANDOLF: Good afternoon, Chair Drew, council members, and staff. For the record,

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this is Sara Randolf, the site specialist for the Goose Prairie facility. EFSEC staff are continuing to receive and review documents being sent by the certificate holder for preconstruction plans. As a condition of their site certification agreement, Article 4, Section D1, the facility is required to obtain a construction stormwater general permit prior to construction.
EFSEC issues coverage under the Department of Ecology general permit. In your packet, you will find a letter of coverage that identifies procedural differences between the Ecology general permit and EFSEC's authorities. Some examples include enforcement authority, fee structure, and transfer of ownership. Goose Prairie Solar submitted their notice of intent for coverage under this permit on March 2nd.
At this time, EFSEC staff recommends the council vote on a conditional approval for granting coverage under the Ecology construction stormwater general permit. Because the Ecology permit was out for comment during its development, EFSEC would not reissue the permit for public comment. Rather, the letter of coverage reconciling the procedural differences with these already-established permit

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conditions will be open to comment.
In accordance with WAC 463-76-41, a 30-day public comment period will begin on April 20th and will conclude on May 20th. If no substantive comments are received upon the close of the comment period, the general stormwater permit would then be issued. If substantive comments are received, the permits would not be issued, and EFSEC staff would return to the council with the comments and a recommendation on permit issuance.
The certificate holder and their consultant are on the phone if there are any questions. Thank you.
CHAIR DREW: Thank you.
I have a question/clarification. Just want to make sure it's clear.
So the comment period is on the changes to that stormwater permit as outlined in the letter, not the underlying conditions of the permit which have already been adopted by the Department of Ecology; is that correct?
MS. RANDOLF: Yes.
CHAIR DREW: Thank you.
And it would be a -- it will be a 30-day public comment period, so we won't be taking public comment at this meeting. But if anyone has comments, you

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should respond to that call for comments that will be going out to interested parties.
Are there other questions from council members?
Hearing none.
I'd like to have a motion to conditionally approve coverage for the Goose Prairie project under Ecology's construction stormwater NPDES general permit.
If no substantive comments are received during the 30-day public comment period, the permit will be issued.
Is there someone who would like to offer this motion?
MS. KELLY: Kate Kelly. So moved.
CHAIR DREW: Thank you.
Second?
MR. LEVITT: Eli Levitt. Second.
CHAIR DREW: Thank you.
Any discussion? This is a fairly standard action for a project using already-established permit conditions.
All those in favor, please say "aye."
MULTIPLE SPEAKERS: Aye.
CHAIR DREW: Opposed?
Motion carries. Thank you.

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Moving on to the Badger Mountain project update. Ms. Snarski.
MS. SNARSKI: Thank you.
This is Joanne Snarski, for the record. We are continuing to work with the applicant and our consultant to complete the first and second data requests for information. During our recent meeting with the applicant, we discussed the information exchange, and it should largely be completed by the end of this month.
The data and information we requested will -- will be reviewed and support the development of the draft environmental impact statement that is currently in progress.
Also, on April 6th, staff conducted a field visit with the Department of Ecology for the purpose of collecting additional information regarding wetlands potentially present on the site. The applicant, their consultant, EFSEC's consultant, and the Department of Fish and Wildlife were also present. Staff are working closely with our contractor and contracted agencies and the applicant to support a thorough evaluation of the potential impacts from the project and identify appropriate mitigation for those impacts.

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That's all I have. Are there any questions?
CHAIR DREW: Are there any questions from council members?
Thank you.
Moving on to High Top and Ostrea project update. Ms. Hafkemeyer.
MS. HAFKEMEYER: Thank you, Chair Drew, council, and staff. Again, for the record, this is Ami Hafkemeyer.
On Monday, April 17th, the governor held a signing event for the approval of the High Top Solar and Ostrea Solar SCAs, at which Chair Drew was present. We have received the executed signature page from the governor's office and have the signatures from the now certificate holders, which are posted to the EFSEC project website.
Are there any questions?
CHAIR DREW: Are there any questions?
I want to thank everybody who worked on the review of this project as it has gone through -- these projects as they've gone through our review process and congratulate Cypress Creek Renewables for these two projects which will now become part of our operational facilities as we move forward. Thank

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you.
Moving on to the Wautoma Solar Project update.
Mr. Caputo.
MR. CAPUTO: Thank you, Chair Drew and council members. For the record, my name is Lance Caputo, EFSEC staff. EFSEC staff are working with agency contractors from Department of Agriculture, Department of Fish and Wildlife, Archaeology/Historic Preservation, technical staff from the Yakama Nation, as well as the applicant, to ensure we adequately capture impacts and identify the appropriate mitigation measures.
We anticipate completing our environmental assessment and issuing a SEPA threshold determination soon. Thank you.
CHAIR DREW: Thank you.
Are there any questions from council members?
Okay. Thank you.
Moving on to the Hop Hill Solar Project update.
Mr. Barnes.
MR. BARNES: Thank you, Chair Drew and council members. For the record, this is John Barnes, EFSEC staff, for the Hop Hill application.
Update from March: A review of the application has determined the need for a data request. This

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request will be sent to the applicant this week. There are no other significant changes to report on at this time. We are continuing to coordinate and review the application with our contractor, contracted agencies, and tribal governments.
Are there any questions?
CHAIR DREW: Are there any questions on this project?
As usual, our data request will be posted to the site as well as the responses we get from the applicant. Thank you.
Moving on to the Carriger Solar project.
Ms. Snarski.
MS. SNARSKI: Thank you, Chair Drew. For the record, this is Joanne Snarski. Last week, we were able to post and send out a notice for the public informational meeting to be held next Tuesday, April 25th. The meeting will be held at the Goldendale Grange Hall.
Over the last several years, EFSEC has elected to hold the public informational meeting and the land-use consistency hearing back-to-back, but this is not required. The Klickitat County commissioners have formally requested additional time to prepare for providing testimony at the land-use hearing. And

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after checking on the availability of the council and the administrative law judge, this is a request that we can accommodate.
We will hold the land-use hearing separately during the week of May 15th. The hearing will be conducted virtually. The details of the land-use hearing will be noticed as required once they are finalized.
Currently, we are also compiling our first data request to the applicant. This supplemental information will help us better assess potential impacts from the project and to work towards completing the State Environmental Policy Act checklist.
That's all I have. Any questions?
CHAIR DREW: Any questions for Ms. Snarski?
MS. KELLY: Chair Drew, this is Kate Kelly. I -- both the Carriger project report and the Hop Hill project report mentioned a data request for the applicants, and I'm wondering if those -- they -- are those requests for existing data, or are they asking the applicants to collect more data that might take time to gather?
CHAIR DREW: I'll ask

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Ms. Hafkemeyer to jump in here. Because we do regularly have data requests as we go through in detail an applicant's submission.
Ms. Hafkemeyer.
MS. HAFKEMEYER: Thank you.
So in response to the question, it can vary. Typically data requests in our initial review ahead of the SEPA threshold determination are for additional data that typically the applicant has on hand but that we would like to review to make our SEPA threshold determination.
Occasionally these are also data requests -- or there may be an item in a data request that asks the da- -- the applicant to, you know, do additional research or provide additional survey results. But more often, that conversation is captured in our coordination with the applicant, and the parameters, study methodology, et cetera, are coordinated with EFSEC staff and any applicable agencies of expertise to make sure that we're collecting the data that we need.
And so sort of in short, to summarize, typically the data requests refer to data that the applicant is likely to have on hand. They may also request information that additional study or information

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gathering is required. But that's a little less common in a data request.

Did you have any other questions about that topic?

MS. KELLY: Nope. That was perfect. That's exactly what I was wondering. Thank you very much, Ami and Chair Drew.

CHAIR DREW: Thank you.

Any other questions from council members?

Okay. We now are moving on to employee updates. And we have a resolution in front of the council. And I'll go ahead and read the resolution into the record.

"Resolution No. 352: Commending Services of EFSEC Staff Member Patricia Betts.

"Whereas, Patty Betts has dedicated over eight years of career service with the Energy Facility Site Evaluation Council with great distinction as the State Environmental Policy Act (SEPA) specialist following 43 years of prior State service; and

"Whereas, Patty Betts provided SEPA expertise on EFSEC's largest project to date (Vancouver Energy), EFSEC's first expedited process application (Columbia Solar), and many other applications during her tenure; and

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"Whereas, Patty Betts worked tirelessly to review and develop responses to over 250,000 comments received on the Vancouver Energy Draft Environmental Impact Statement (EIS), by far the most comments ever received on a single project by EFSEC; and

"Whereas, Patty Betts worked meticulously with EFSEC staff and contracted agencies to prepare SEPA documents with the goal of improving each project that she reviewed; and

"Whereas, Patty Betts provided the SEPA guidance for the development of EFSEC's streamlined solar application form, which has been used (in beta testing) for every solar project received since its creation; and

"Whereas, Patty Betts has respectfully worked with and in support of three council chairs, 17 council members, and 25 staff; and

"Whereas, Patty Betts delayed her retirement to share her SEPA knowledge in the training of many new EFSEC staff so that they may be successful in their current and future application reviews; and

"Whereas, Patty Betts' proclivity for chocolate became so well-known, she was rarely caught in a working meeting without her jar of chocolate milk;

Now, therefore, be it resolved, that the Energy

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Facility Site Evaluation Council hereby recognizes Patty Betts' outstanding, unwavering, and faithful contribution to the Energy Facility Site Evaluation Council staff and council alike and gratefully expresses its sincere gratitude for her commitment, dedication, effort, professionalism, hard work, and consideration she has shown over the past year.

"Dated this 19th day of April, 2023."

And I will ask the council to verbally express their appreciation by voting "aye" on this resolution.

All those in favor, please say "aye."

MULTIPLE SPEAKERS: Aye.

CHAIR DREW: Thank you, Patty. And thank you, council.

The next item on our employee updates is a new-employee introduction, Alex Shiley.

Ms. Owens, would you like to introduce her?

Oh. Did I have a comment from Ms. Hafkemeyer first?

MS. HAFKEMEYER: No. I apologize. That was a misclick.

MS. OWENS: I suspected as much.

CHAIR DREW: Only allowed once in a while. Thank you.

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Okay. Ms. Owens.

MS. OWENS: Thank you.

Good afternoon, EFSEC council and staff. For the record, this is Joan Owens. I would like to introduce to you our newest employee, Alex Shiley. Alex's first day with EFSEC as an administrative assistant began on April 10th.

Alex has worked in administrative roles for years across various organizations in the private sector, having started as a student intern with the City of Kent. Most recently, she worked in office support and assisted with project management for an administrator for union health and pension benefits.

Alex will be joining Andrea Grantham in assisting EFSEC staff with various administrative tasks, including council meetings and other public meetings, so you'll have plenty of opportunities to get to know Alex in the future.

Welcome to the team, Alex.

CHAIR DREW: Welcome, Alex.

MS. SHILEY: Thank you. I'm excited to be here.

CHAIR DREW: Great. We're very excited to have you.

Okay. Moving on now to the fourth-quarter cost

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allocation. Ms. Bumpus.

MS. BUMPUS: Thank you, Chair Drew. Good afternoon, council members.

So today we have our fourth-quarter cost allocation for Fiscal Year 2023. And I'll just read off the percentages.

For Kittitas Valley wind power project: 4 percent.

Wild Horse is 4 percent.

Columbia Generating Station: 20 percent.

Columbia Solar: 4 percent.

WNP-1: 3 percent.

Whistling Ridge: 3 percent.

Grays Harbor 1 and 2: 6 percent.

Chehalis: 6 percent.

Desert Claim: 3 percent.

Goose Prairie Solar project: 4 percent.

Horse Heaven: 15 percent.

Badger Mountain: 6 percent.

Cyprus Creek: 4 percent.

Wautoma Solar: 6 percent.

Hop Hill: 6 percent.

And Carriger Solar is 6 percent.

And that concludes my update on the nondirect cost allocations for fourth quarter.

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Are there any questions?

CHAIR DREW: Thank you.

And with that, this concludes the business for EFSEC council today. And this meeting is adjourned. Thank you, all, very much.

(Meeting adjourned at 2:05 p.m.)

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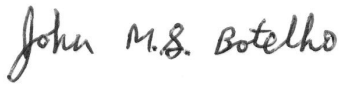
STATE OF WASHINGTON)
) ss
County of Pierce)

I, John M.S. Botelho, CCR, RPR, a certified court reporter in the State of Washington, do hereby certify:

That the foregoing Monthly Meeting of the Washington State Energy Facility Site Evaluation Council was conducted in my presence and adjourned on April 19, 2023, and thereafter was transcribed under my direction; that the transcript is a full, true and complete transcript of the said meeting, transcribed to the best of my ability;

That I am not a relative, employee, attorney or counsel of any party to this matter or relative or employee of any such attorney or counsel and that I am not financially interested in the said matter or the outcome thereof;

IN WITNESS WHEREOF, I have hereunto set my hand this 3rd day of May, 2023.



John M.S. Botelho, CCR, RPR
Certified Court Reporter No. 2976
(Certification expires 5/26/2024.)

ENERGY FACILITY SITE EVALUATION COUNCIL

Carriger Solar Project

Informational Public Meeting

April 25, 2023

Glendale Grange Hall
228 East Darland Drive
Goldendale, WA 98620

And

Via Teams Video Conferencing

Reported by: STEVEN B. CRANDALL, CER
Certified Electronic Reporter #1198

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CHAIR DREW: Good afternoon. This is Kathleen Drew, Chair of the Energy Facility Site Evaluation Council, calling to order our public information meeting tonight. I will say that this is a meeting about solar project called the Carriger Solar Project, and as required by RCW 80.50.09.01 and WAC -- that's Washington Administrative Code -- 463-26-025 EFSEC is holding this public informational meeting.

At this meeting, EFSEC staff and the applicant will introduce themselves and the Counsel for the Environment and assist -- who is an Assistant Attorney General appointed by the Washington Attorney General, and that person will be introduced and explain the duties of this position. The applicant and EFSEC staff will make presentations.

Following the presentations, the public will be invited to provide comments. Speakers will have two minutes each to speak. I know that some were told we would have three minutes, but we had so many more people sign up that we wanna give everybody an equal opportunity to be heard this evening. If you do not say all you wish to say to us, you can send your in comments, your comments in writing to comments at efsec.wa.gov and an online database is open during the meeting until midnight tonight. And so you can go

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straight into that comment database and provide your comments. And that is https://comments.efsec.wa.gov. At this point, I would ask for Ms. Grantham to call the role.

STAFF GRANTHAM: Certainly. Department of Commerce.

STAFF GRANTHAM: Department of Ecology.

ELI LEVITT: Eli Levitt present.

STAFF GRANTHAM: Department of Fish and Wildlife.

MIKE LIVINGSTON: Mike Livingston present.

STAFF GRANTHAM: Department of Natural Resources.

LENNY YOUNG: Lenny Young present.

STAFF GRANTHAM: Utilities and Transportation Commission.

STACEY BREWSTER: Stacey Brewster present.

STAFF GRANTHAM: Local government and optional state agencies for the Carriger Solar Project for Klickitat County. Do we have a Matt Chiles?

MATT CHILES: Matt Chiles present.

STAFF GRANTHAM: For the Assistant Attorney Generals, Jenna Slocum?

JENNA SLOCUM: Jenna Slocum present.

STAFF GRANTHAM: And John Thomson.

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For the Administrative Law Judge, Micah Larripa.

JUDGE LARRIPA: Micah Larripa is present.

STAFF GRANTHAM: For EFSEC counsel staff, Sonia Bumpus.

(No response)

Ami Hafkemeyer.

AMI HAFKEMEYER: Ami Hafkemeyer present.

STAFF GRANTHAM: Joan Owens is present.

Sean Greene.

SEAN GREENE: Sean Greene present.

STAFF GRANTHAM: Joanne Snarski.

JOANNE SNARSKI: Joanne Snarski present.

STAFF GRANTHAM: Alex Shiley.

ALEX SHILEY: Alex Shiley present.

STAFF GRANTHAM: And for the Counsel for the Environment we have Sarah Reyneveld. Are you there?

SARAH REYNEVELD: Sarah Reyneveld present.

STAFF GRANTHAM: Thank you. Chair, we have a quorum for the regular Council and for Carriger Solar. Thank you.

CHAIR DREW: Thank you. We will begin with the presentation from the Counsel for the Environment. Would you, Ms. Reyneveld, please state your role and what the public can do if they're

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concerned about this project?

SARAH REYNEVELD: Yes. Sarah Reyneveld and I'm the assigned Counsel for the Environment for the Carriger Solar Project. Counsel for the Environment represents the public and its interest in protecting our environment. And you are welcome to reach out to me. My email is Sarah, S-A-R-A-H, dot Reyneveld, R-E-Y-N-E-V-E-L-D, at A-T-G dot W-A dot G-O-V. Thank you.

CHAIR DREW: Thank you. Next, we have the EFSEC's process presentation. Ms. Hafkemeyer.

AMI HAFKEMEYER: Thank you, Chair Drew. Welcome everybody. My name is Ami Hafkemeyer. I am the Director of Siting and Compliance for EFSEC and I will be giving a short presentation on the EFSEC siting process for those of you who are unfamiliar with our agency.

Next.

A little bit of history of the EFSEC Agency. EFSEC was created in 1970 for the siting of thermal power plants. The intent was to create a one-stop permitting agency for large energy facilities. EFSEC is comprised of state and local government members who review each application before voting to make a Council recommendation to the Governor. If recommending

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approval, the package to the Governor includes a draft site certification agreement or SCA which defines all preconstruction, construction, and operations plans. If approved by the Governor's office, the decision preempts other state or local regulations.

Next.

Multiple energy generation facilities fall under EFSEC's jurisdiction. Some projects, including thermal power plants greater than 350 megawatts and nuclear generation for the purposes of generating electricity are required to sited through EFSEC while others such as wind, solar, green hydrogen, storage, or clean energy manufacturing can opt in to our process at any size. Transmission lines greater than 115 kilovolt can also opt in. And there are thresholds for pipelines and refineries that may be sited through EFSEC that are found in the Revised Code of Washington or RCW 80.50.060.

Next.

EFSEC is comprised of members from several different state level agencies. The chairperson is appointed by the Governor and there are standing members from five other agencies appointed by those agencies to sit on the Council. The current Council is made up of Chairwoman Kathleen Drew, Eli Levitt from the Department

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of Ecology, Mike Livingston from the Department of Fish and Wildlife, Kate Kelly from the Department of Commerce, Lenny Young from the Department of Natural Resources, and Stacey Brewster from the Utilities and Transportation Commission.

There are additional agencies that may elect to appoint a Council member during the review of an application. These agencies are the Department of Agriculture, the Department of Transportation, the Department of Health, and the Military Department. These agencies have not appointed a Council member for the review of the Carriger Project. The local county shall also appoint a council member for the review of an application and Klickitat County has appointed Matt Chiles.

Next.

Here's a map of the facilities that are certificated or have applied for certification under EFSEC jurisdiction. You can see, marked in green, there are six operating facilities, including two natural gas facilities, one nuclear facility, one solar facility, and two wind facilities. The blue marks indicate the four additional facilities that are approved but have yet to start construction. Two being wind facilities and two being solar facilities. The clear marker is the

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one facility in the process of decommissioning. And EFSEC is currently reviewing applications for five projects, including the Carriger Project, which is what brings us here tonight.

Next.

Okay, so here's a flow chart showing the general process an applicant will go through when they submit an application to EFSEC. There are green arrows on the chart that indicate specific milestones in the process where the Council and staff seek public input. You can see here that there are multiple processes that happen concurrently when EFSEC is reviewing an application. There is the land use hearing and adjudicative process outlined on the far left, the state environmental policy act or SEPA process outlined in the middle, and the third process on the far right involves identifying and preparing applicable environmental permits. All of these processes ultimately feed into the Council's recommendation to the Governor.

Where an adjudication is required following the land use consistency hearing, an order is issued to commence proceedings and initiate intervention. Here, members of the public wishing to participate in the adjudication must identify themselves and their issues in writing. There are pre hearing conferences through

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which parties are granted intervention status and issues are identified. Exhibits and testimony are provided and cross examination, sorry, cross examination is conducted, after which the Council looks at all the information in the adjudication record and deliberates. Finally, the Council develops an order establishing their findings of fact and conclusions of law from the information provided throughout those proceedings.

Moving on to the middle tier. For every project proposed, a SEPA review is performed. When a determination of significance and a decision to prepare an environmental impact statement or EIS is made, public comments are taken on the scope of the EIS. After public comment for scoping, the SEPA responsible official determines the scope of the EIS. A draft EIS is prepared and issued with the minimum 30-day public comment period, after which the final EIS is prepared and released.

In some instances, a Determination of Nonsignificance, a DNS, or Mitigated Determination of Nonsignificance, MDNS, is issued. If the SEPA responsible official determines that a project meets the criteria of a DNS or MDNS, an EIS is not required. In this process the determination is notice to the public and there is a minimum 15-day public comment period for

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an MDNS, while a DNS requires no comment period. Following the conclusion of these separate avenues of application review, the Council develops its recommendation to the Governor tying together the information brought forth through the application review processes.

Next.

I'd like to talk briefly about the expedited siting process as it has been requested for the Carriger proposal. To be considered for expedited processing, an applicant must make the request in writing, and the project must meet two criteria. First, it must be determined to be consistent with local land use ordinances and codes, and second, the SEPA determination must be that of a DNS or MDNS in this expedited process and the adjudication step is not required and a full EIS is not developed. The Council prepares their recommendation to the Governor in an expedited timeframe under this process.

Next.

EFSEC is also the issuing agency for any applicable environmental permits that a facility may require, including water quality and air quality permits as they may apply. These permits are identified in the final package with the Council's recommendation to the

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Governor.

Next.

At the conclusion of the Council's review of an application, a recommendation is made to the Governor to either approve or reject the application. This initiates a 60-day window within which the Governor will then either approve the application, reject the application, or remand the application back to the Council for reconsideration. Any application that is rejected by the Governor is a final decision for that application.

Next.

If an application is approved by the Governor, EFSEC then has oversight of the environmental compliance for the life of the facility through decommissioning. EFSEC has standing contracts with applicable state agencies that assist in the monitoring and enforcement of conditions either in the site certification agreement, identified permits, or EIS or MDNS. EFSEC's enforcement authority extends to the issuance of any penalties as they may apply.

Next.

As previously mentioned, EFSEC oversees facilities under its jurisdiction through decommissioning. Prior to the start of construction of

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approved projects an initial site restoration plan, or ISRP, is required. Then at the end of the life of the facility, prior to the start of decommissioning, a detailed site restoration plan is required. These plans must be reviewed and approved by the Council. The project must also provide financial assurance for the decommissioning in the event that the project is no longer able to complete the process. Assuming the project decommissions while still under full control of the developer, those costs would be play paid directly by the certificate holder.

Next.

So that concludes my presentation this evening. Before I end, I would like to reiterate how everybody can submit comments for this proposal. If you'd like to sign up to speak this evening and you are joining us virtually or by phone, you can call the EFSEC mainline at 360-664-1305 to be added to the speaker list. You may also send in written comments by postal mail to our office at 621 Woodland Square Loop, PO Box 43172, Olympia, Washington, 98504-3172.

Comments may also be submitted to our online database at https://comments.efsec.wa.gov. There's also a database available for the duration of the meeting for anyone wishing to submit comments through our online

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database. Oh, I just said that. Sorry. It should be zero five, shouldn't it? Four five. I apologize. 360-664-1345. If you want to talk to me directly, dial 05. In case you were curious where that little slip came from.

All comments received, regardless of method of delivery, will be saved with the project record and available for Council and staff review. Chair Drew your microphone is off so online cannot hear you.

CHAIR DREW: Oh, thank you. No problem. Okay. Let's see if we can get the rest of this right. Okay. Next we have Cypress Creek Renewables with their presentation.

LAUREN ALTICK: Thank you, Chair Drew. Thank you, everyone for joining us this evening. My name is Lauren Altick. I'm a Project Developer at Cypress Creek specifically for the Carriger Project. Thanks. Can everyone hear me okay? And I'm here with Tai Wallace, Senior Director of Transmission.

And next slide, please. Next slide, please.

And we are going to be introducing the core project team, give an overview of Cypress Creek Renewables, the company, and provide an introduction to Carriger Solar. And the appendix provides the application for site certification, site plan seats, for

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the record. And I will pass it on to Tai -- or actually, I'll do the introduction to.

Next slide, please.

So, I already introduced Tai and myself. Our Environmental Director is Seja Stratton, our Senior Environmental Manager, Julie Alpert, both with CCR, and we have Leslie McClain with Tetra Tech and she is our Environmental Consultant, Project Manager. And Leslie is with us this evening.

TAI WALLACE: Good evening. Thank you, Chair Drew, EFSEC counsel, staff, and thank you all stakeholders for joining us today.

Next slide, please.

So my name is Tai Wallace. I'm Senior Director of Development here at Cypress Creek, and I cover transmission-scale markets in the west with a heavy and intense focus in the state of Washington. So Cypress is a mission-driven company. Our mission is powering a sustainable future one project at a time, and we've been in business since 2014. We were founded and, to date, have developed over 800 projects across the country. We own and operate over 200 projects. And, you know, we develop through our five core competencies or, all right, what we call our five Cs, you know, care, courage collaboration, creativity, and conviction.

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Next slide, please.

So our core competencies include development, operations and maintenance services, and fleet services. So effectively asset management. These are our three business divisions. We have about 400 staff spread across the country, and we operate in about 24 states.

In terms of our development portfolio, we have about 12 gigawatts of solar energy projects developed to date, and we have about 55 megawatts of storage that's developed to date in operations. We have a policy-driven strategy. So we look at markets, you know, from top to bottom, and we're very thoughtful before we enter those markets, and we do a lot of stakeholder engagement at the market level before we even conceive of an individual project.

We have diversified experience with both transmission-scale development and community-scale development, which is more distributed generation. And believe to get to a sustainable future, you have to develop on both sides of the transmission and distribution system.

We have an award-winning Structured Finance team and we have done a lot of financing for our assets and, you know, for those that are others as well. And we have an innovative construction and design and

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third-party EPC contracting team. Justin who leads that for The Pacific Northwest and joins us today brings immense experience both at the utility level, at the construction contracting level, and now joins us, you know, at our project level to take, you know, our projects to fruition and make sure that we meet the standards under permitting.

So, in terms of O&M Services, you now, we are a fully vertically integrated independent power producer or IPP. We develop projects with the intent, as often as we can, to own and operate those projects for the long term. And we have four gigawatts of projects under contract. We only operate and maintain solar and storage projects. Those four gigawatts under contract are both our own assets and assets of other developers and other shops. We have a state-of-the-art NERC-registered Control Center that has 24/7/365 operations and control and remote maintenance capabilities for all of our assets that we operate for ourselves and others. And we have, you know, business services that include warranty administration, all of the compliance requirements in all of the markets that we operate, industry-leading drone program, and one of the best total recordable incident rates in the industry in terms of safety, compliance, and standards.

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And then in terms of our fleet, we operate two gigawatts of projects spanning 217 individual assets across 14 states. These projects are managed 24/7 and, you know, through our asset management in fleet division, we pay all of our bills, all of our tax bills, and, you know, manage all of the filings and requirements for each of these projects day in, day out.

Next slide, please.

So in terms of, you know, our solar and development growth, you know, we, again, are vertically integrated, you know, a full solar focused IPP focused on just solar and storage development. This is our bread and butter. This is what we've done, you know, time in and time out, and we have done this, you know, across the country in multiple different states.

Next slide, please.

This slide just shows, you know, actual pictures and images from our 24/7/365 NERC-certified control center. This facility is located in Raleigh-Durham, North Carolina. And, you know, this is manned or stationed by our folks who have some of the highest safety standards and some of the deepest industry experience across the solar and energy industry. A number of folks come from nuclear plant operations background, from utility backgrounds, and

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they're very experienced at what we do. And we can see and remotely monitor and operate all of our facilities across the country, all 217.

Next slide, please.

So part of what we try to do in terms of development is educate folks about what solar is. There's often a lot of, you know, mystery, you know, about what it is these facilities do, especially in a community that does not have existing, you know, generating solar assets to date. So, you know, when you look at the key systems and components, they're effectively broken up into solar modules, which actually generate the DC electricity from the sunlight. You know, the goal of these pieces of equipment is to absorb as much sunlight and convert that to as much energy as possible. That DC electricity then runs into the DC/AC inventor where it's converted to alternating current and it is stepped up to a medium voltage. Those modules are placed on racking systems, which are, you know, essentially galvanized steel, and those are imbedded into the ground and the subsurface. And they're rated to withstand all types of, you know, events and, you know, power through things like hurricane and wind events, manage snow load, and wind load, and all of those other aspects. The combiner boxes take that low

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voltage DC electricity, and they feed those cables, you know, from each module into a combiner box. Those then feed into the cabling, into the inverters, and then go into the medium voltage collector lines. Our monitoring systems, which are critical, are all our meters and gauges that we use to measure and report system preferences and performances back to our own facility both on site and in North Carolina. And in the case of battery systems, and for this project, AC coupled, that system is a series of lithium-ion batteries that will store that energy safely for use throughout the day.

Next slide, please.

And so what we took here is a sampling of a few of our projects that we've developed. We have a number of smaller assets at the distribution level that we've developed and operate in Oregon. So we wanted to show projects that are contextually relevant from a geographic location perspective, and then we also wanted to show large projects that represent designs that accommodate, you know, some of these environmental features and things like we do here, such as our Wagyu Project in Texas, which is near the scale of this project and our IS37 Project in North Carolina where we have built and developed hundreds of projects to date.

Next slide, please.

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And so I'm going to pass it back to Lauren to take you through the Carriger Project.

LAUREN ALTICK: Okay. So, Carriger Solar is a 160 megawatt solar project with the option for 63 megawatt battery storage system. We have full-site control, interconnection studies are complete, transmission studies are complete, and we have transmission rights secured. All topographic, geotech, hydraulic, and hydrologic assessment studies have been completed. The land use consistency hearing and site certification will go through EFSEC, as Amy previously discussed. All preliminary field surveys have been complete, and the SEPA determination will go through EFSEC as well. I will discuss that in the next slide, in the next few slides. Wetland delineation has been completed. We're avoiding all potential fish bearing waterways, and we have completed a third-party property tax assessment that I will also be discussing on the next slide. Lastly, the initial engineering procurement, and construction RFP, has been complete. Justin on our team is going to be working on that going forward. And, yeah, that's where we're at. Lots going on since the start of development in 2018.

Next side.

So, the economic benefits that are directly

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attributable to Carriger, the property tax revenue projections were done by a third party, and these estimates are based on 2023 tax levies through the county. So obviously this will vary, but it is an educated estimate and can be used as a reference point at this time. Aside from local investment, Carriger is estimated to create between 350 and 450 full-time construction jobs that will have a ripple effect in the local economy. And then there are obviously the environmental benefits. Carriger is anticipated to provide enough electricity to power 32,500 homes annually, clean energy, and the carbon offset is estimated to be the equivalent of 10,800 cars off the road each year.

Next side, please.

So I'm going to spend bit of time on this slide as I expect this is of interest to the community. So the project is designed with safety measures in mind to address concerns for fire, noise, and glare, specifically. It has been designed to meet environmental noise limits established by the Washington Administrative Code, and an acoustic assessment report was completed. The results indicated that the project will comply with the most stringent 50 decibel night-time limit at all noise-sensitive receptors.

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A clear analysis was also completed and predicted no glare at receptor points around the project area and very limited amounts of glare along Knight Road and State Route 142, and those were only during certain times of the year. A copy of the glare study was provided to the FAA. The FAA determined no hazard for air navigation from the solar project.

Moving onto electric and magnetic fields, they will be produced, its electrical equipment, they're produced from all electrical equipment when conductors are connected to a power source, such as a lamp, a microwave, et cetera. That said, the project solar panels and collector lines are expected to produce very low levels of EMF, and no EMF from the project equipment is anticipated to extend beyond the project area boundary.

Moving on to fire safety, design elements are incorporated throughout the entire project design to minimize risk of fire ignition. The BESS containers include state-of-the-art fire prevention and suspension -- suppression -- excuse me, systems. Significant amount of progress on these technologies in recent years and will only continue to be so. Project operations will be monitored 24/7 as Tai already discussed previously. A 20-foot fire break will be

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maintained along the entire permitter of the fence lines. And lastly, a fire control plan will be prepared and submitted to EFSEC and the county prior to construction. Fire suppression protocols will be determined in consultation with the Klickitat County Fire Marshal and will be outlined in a fire control plan.

Lastly, local building and electrical inspectors will review and approve construction levels, prior level permits, prior to construction of the project. So a lot on this slide. It is on the EFSEC website, so you can review in further detail.

Next side, please.

Moving on to permitting and SEPA. So, EFSEC is obviously responsible for evaluating applications for site certification to ensure that the environmental and socio-economic impacts are considered before making a recommendation to the Governor to approve or deny the project. The State Environmental Policy Act, or SEPA, checklist is included in this application for site certification. And you can see all of the emblems that we included. Those are the various aspects of this environmental policy act, of which many have been designated necessary for Carriger to undergo in this application.

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Next side, please.

So Cypress Creek, the team, has consulted, coordinated with various local, state, tribal, and federal agencies of which the list is on the screen. And many of the SEPA studies cited on the previous slide was discussed with these applicable agencies to ensure that proper survey protocols were followed. Coordination with these agencies will be ongoing throughout the review process.

Next slide, please.

This slide shows the actual studies that were conducted. So the topic is to the left. Study is to the right. All of these are included in our application and are listed on our website. The visual impact assessment was submitted to EFSEC on April 18 and has also been uploaded to the website. So everyone from the public is welcome to review these studies.

Next slide, please.

This is an example of Carriger Solar, what went into our micro siting. Cypress Creek prides itself on very intentional and conscientious project design. So the first visual in the lower left, you can see there are quite a bit of panels around the waterways. And I'm sorry, I don't have a beam, but that's where all the grey, you know, sections are. Those represent panels.

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So that was prior oh, thank you so much. Yeah, exactly. So that was prior to the consultation with agencies prior to all of the studies that we conducted. The next slide in the middle, or the next picture in the middle, shows the next iteration where, you know, we started to learn more about the land, got more information, tweaked the site plan. The final one, you can see, was after all the consultation, after all of our studies were complete, and we removed the entire middle area there from the project site plan to allow for wild life movement and to account for vernal pools, waterways, et cetera. And another thing to know, we are not cutting down any trees on this project. We have been very intentional with set backs and allowing for wildlife movement and habitat and the like.

Next slide, please.

And to end, I wanted to circle back to the community. Cypress Creek is -- seeks to establish relationships with the community that we develop in. We focus on four primary areas, environmental sustainability, STEM education, workforce development, economic development, and community investment, and veteran's initiatives. This is something that we take very seriously all the way up the chain at our company. So we're doing so here in Klickitat. We already have

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initiatives underway. Most recently, there's a Klickitat County scholarship program, May 5th deadline. If anyone has not heard of that, please reach out and I can provide additional information. But we will be continuing to partner with the community throughout the life of the project. It's something that we take very seriously.

And next slide.

And that's it. And, again, just to note, we do have the site plans in the appendix, but just for the record, there was nothing specific that we were going to reference. And the site plans are available on the EFSEC website. Thank you so much.

CHAIR DREW: Thank you. We are now going to move on to our public comment portion of this meeting. Thank you all for being here tonight and also online on this lovely day in your community here. It's a pleasure to be here, and we look forward to hearing each and -- from each and every one of you who wished to speak. And so we are going to limit, as I said earlier, limit comments to two minutes. We're going to start with asking you to state your name and then spell your first and last name because we have a court reporter and we wanna take an accurate record of the people who are speaking tonight. And I will turn it over to Judge

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Larripa, who will be presiding over this portion of the meeting. Judge.

JUDGE LARRIPA: Thank you, Chair Drew and good evening, ladies and gentlemen. I am Micah Larripa, and I serve as an Administrative Law Judge with the Washington State Office of Administrative Hearings, a neutral and independent state agency. For the comments, which will begin momentarily, and Alex Shiley, right over to my left, has taken down the names of people who wish to speak, and we'll call each of you up in the order that you signed up. If you're here in person, please step up to the podium and as Chair Drew mentioned, please state and spell your name, and then I'll invite you to begin with your comments.

I am mindful that two minutes may not be enough time to conclude whatever you'd like to say tonight. Again, in the interest of ensuring that everybody has the opportunity to speak, we must limit the time, but please understand that you will have the opportunity to submit anything additional, or if, after you've spoken, you hear something else that you desire to comment on, you may do so in writing. I will ask -- I understand that we have a number of people who wish to speak tonight. I will ask that while you wait for your opportunity to speak or after you've spoken, if you're

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still in attendance, that you be respectful and courteous to the speaker who is at the podium. With that, Alex, would you please call the first the -- the first speaker this evening.

STAFF GRANTHAM: We'll be hearing from County Commissioner, Dan Christopher.

DAN CHRISTOPHER: Clarification question. So if we have written comment from the county itself, can I submit that to somebody here or do we have to do that online?

STAFF GRANTHAM: We have a comment box in the back.

DAN CHRISTOPHER: Got it. Thank you. Chair and members of the EFSEC Board. I am Klickitat County Commissioner Dan Christopher and this is my district. I am here speaking on behalf of the voters of Klickitat County. I believe Klickitat County is the green energy capital of Washington state. We have and continue to be pro green energy. This county has permitted -- it in itself has permitted over 602 windmills, a landfill gas facility that is second to none, and a 194 megawatt solar farm. We are also currently permitting another 150 megawatt solar farm in the county. We have many more solar, wind, and water-pump storage projects planned and coming, and we

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are welcoming of them as long as they can continue to be sensitively cited.

As you can see, we are pro green energy. I am sure that many of you have dealt with many anti green energy counties in the past, but please understand that we are different. We also are a county that wants to sensitively site our projects in a way that doesn't hurt our people. We have areas of our county that have been deemed by the state as poor and impoverished areas that are begging for growth and economic development. Yes, I am speaking of Goldendale, which is where you are.

There are currently three to four solar companies looking to surround this poor and impoverished community on all sides with about 10,000 acres of solar panels that would forever stifle growth, economic development and, jobs in this area. That would be a 3-year boom followed by 40 years of economic devastation. You may hear testimony from some people today looking to cash in on that short-term money grab. I am not one of them.

As Chairman of the Klickitat County Board of Commissioners, I am begging you to honor and allow us to work through our current solar moratorium and create population density criteria in this valley. Let us work with the residents to establish areas in our county

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where we can continue to sensitively site solar projects in a way that won't cripple this community or (inaudible). Thank you for your time and consideration.

JUDGE LARRIPA: Thank you, sir, for your comments.

STAFF GRANTHAM: Next, we'll have County Commissioner Lori Zoller.

LORI ZOLLER: I did submit comments to EFSEC in anticipation of timing. I tried to cut them down, so I'll try to give you the short version. Klickitat County is an over achiever in green energy. Starting in 1990s we opened a program at our land fill the capture methane gas and turn it in to energy. Klickitat County currently has 602 operating wind towers, and we're in the process of the pumped storage project, which the Governor himself has touted and toured as the state of green energy project for Washington state.

Klickitat County, is currently the largest supplier of green energy in the state of Washington. In 2005 we enacted the first energy overlay zone. That energy overlay zone focused on wind at the time. Discussions in planning for solar at the time were barely a side note and directed at personal or small projects.

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The creation of the EOZ, a single environmental -- with the creation of the single -- excuse me, with the creation of the EOZ, a single environmental impact statement was produced intended as a blanketed EIS for the construction of wind projects, but in the final stages, the EOZ was appealed. Requirements were set in place, at that time, that if large solar came into our county, each would require site by site its own EIS, and the county would also retain the right to be the lead agency for large scale solar or be allowed to pick the agency that would be that lead.

In 2023, the placement of the new moratorium, prior to the submission of the Carriger application, ensured the county were to have time to accomplish the required studies and addition of large scale solars to update our documents and ordinances. We have already began that process with our planning director and planning commission. Proper sensitive siting for large scale solar is a priority in our county. In review I could not come to rest on any chapter (inaudible).

JUDGE LARRIPA: Thank you, Commissioner.

STAFF GRANTHAM: Next we'll hear from County Commissioner Jacob Anderson.

JACOB ANDERSON: That's Jacob, J-A-C-O-B, Anderson, A-N-D-E-R-S-O-N. Dear members of the Energy Facility Site Evaluation Council, I'm here to express my concerns on the proposed Carriger Solar Project and to request that you do a full environmental impact statement.

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As a county commissioner, it is my responsibility to ensure the best interest of the community are taken into account, and I believe a full EIS is necessary to fully assess the potential impacts of this project. The Carriger solar facility is a significant development. With a capacity of a 160 megawatt, this will be one of the largest solar facilities in our region. It will have significant impacts on our environment and our community. As such, it is essential a full EIS is conducted to provide a thorough and comprehensive analysis of the potential environmental and social impacts of this project.

There are several key factors that support the need for a full EIS. First and foremost, the proposed project is located in an area of significant environmental sensitivity. As the ACS has over 900,000 cubic yards of earth being moved, the potential impacts of this project on these sensitive areas must be thoroughly assessed to ensure they're protected.

Secondly the proposed project has a potential

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to impact the health and safety of our community. The construction and operation of a solar facility of this scale will generate a significant amount of traffic, noise, and dust. These impacts could have adverse impacts on the nearby residences and businesses, and it is essential that these are thoroughly assessed and mitigated. Both solar projects going on in this county currently and through the process have been required to do an EIS even though they have far less environmental as well as community concerns.

Finally, the proposed project has the potential to impact our local economy. While I recognize the potential benefits of solar facilities, such as the job creation, increased tax revenues, it is essential that the potential negative impacts on other sectors of our economy are assessed. For example, the visual impact of a large solar facility could impact our tourism, which has -- which is a significant economic driver in the region.

In conclusion, I believe that a fully (inaudible) or the potential impacts of the Carriger solar facility are thoroughly address -- assessed as well as addressed and mitigated. Thank you.

JUDGE LARRIPA: Thank you for your comment, commissioner.

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STAFF GRANTHAM: Next we'll hear from Sheri Bousquet.

SHERI BOUSQUET: Sheri Bousquet, S-H-E-R-I, B-O-U-S-Q-U-E-T. Welcome to our beautiful county. I hope you enjoyed our mountain views. I don't believe any of you should be here today, but here we are. I don't believe you have territorial jurisdiction in our county. And I'm asking for legal proof. I've said in my documentation, I don't believe you have that authority to supersede our comprehensive plan and our land planning. I would again request to have that proof that you have territorial jurisdiction.

Furthermore our county does have a moratorium. It was in place prior to you accepting this application, and that's shameful that you did. You should've stopped right there. Everything should have stopped right there. It should stop right here. You're violating RCW 89.10.005 farmland preservation. You refused to go on our site there to see the farmland, the active farmland that's being farmed right now. How will you eat? How will you feed your family when you take away all the farmland? People are worried, China -- I'm going off script -- people are worried China is buying up farmland. Well, when you destroy our farmland with black glaring glass, stripped of all of its topsoil, a

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dust bowl, how will we eat? Will China feed us? Their farmland won't have solar panels. They won't put their solar panels, that we buy from them, on that farmland.

Furthermore, I find that you need to find significant environmental damage with this project. No EIS. This needs to stop now. Right here. Right now. Today. You are people. You should do no harm by sitting that facility. Going further, you will harm every single person in this room. Every single person in this town. We already have an economic issue here. We need economic growth. We don't need to be destroyed. We don't need to be destroyed. (Inaudible) significant. It is not consistent with our values.

JUDGE LARRIPA: Thank you for your comment, ma'am. And for our next speaker.

STAFF GRANTHAM: Next we'll hear from Greg Wagner.

GREG WAGNER: Greg Wagner, G-R-E-G, W-A-G-N-E-R. CEASE members are submitting this following comments for the record concerning the certification of the Carriger Solar Project. The ASC submitted by Cypress Creek Renewables for the Carriger Solar Project is flawed, filled with errors, omissions, inaccuracies, and non factual information. There is no purpose for this project other than corporate profits.

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It will do more harm than good.

Klickitat County has a history of ranching and farming. This project is not consistent with the current land use in its proposed location, is not consistent with Klickitat County Comprehensive Plan. This project is also not compatible in the area proposed. For these reasons, this project should not be certified. There are multiple significant issues that cannot be mitigated.

This project should not be allowed on productive farmland as it violates the RCW 89.10.005 and the farm -- it's a farmland preservation act and the U -- and it also violates the USDA farmland protection act. Siting this project on thousands of acres of productive farmland reduces the food supply for Americans and makes our country more reliant on food source from other countries, countries which still apply harmful chemicals to those crops, chemicals which were outlaw in the United States years ago. This contaminated food source endangers the lives of Americans.

If a preliminary site study would have been done, it would have been obvious that this project is in an inappropriate location and cannot be sensitively sited. The ASC is poorly written with many assumptions

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and inaccurate data. Many of the required studies are out of date. Many studies were performed by Tetra Tech. The accuracy of those studies are questionable considering Tetra Tech is under investigation by the Department of Justice for environmental fraud and two employees have already been sentenced to prison. These studies should not be accepted and performed again by an independent firm hired by EFSEC. EFSEC should stop trusting the applicant study. The ASC failed to accurately evaluate project (inaudible). Thank you.

JUDGE LARRIPA: Thank you for your comment, sir. For the next speaker.

STAFF GRANTHAM: Deb Wagner.

DEBORAH WAGNER: Deborah Wagner, D-E-B-O-R-A-H, W-A-G-N-E-R. These are my comments why Carriger Solar Project should not be certified. 201 days of sunshine per year here. Carriger will not be successful. You have to have sunshine to have a solar site. That is approximately one half of the year sunshine, the other half, I guess, we'll freeze to death. This just proves it's all about money, not the needs of the citizens.

Number two, the Clean Water Act is a federal law enacted in 1948, and amendments made in 1972, to protect our water. Our water should not be contaminated

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by solar sites.
Number three, an RCW, 89.10.005, written to preserve farmland. Carriger Solar sited on farmland violates state law. Everyone needs food to sustain their lives and to site Carriger Solar on farmland is irresponsible. Do not certify this project and take away our food.
There are two people in jail from Tetra Tech for criminal acts. Tetra Tech is now being investigated by the Department of Justice for fraudulent environmental acts. I do not want Cypress Creek Renewables in our county doing business.
Carriger solar site will not bring enough energy to sustain life. The solar site as we know it today, the Carriger Solar Project, is not consistent with Klickitat County land use plans and has many significant problems that can not be mitigated and therefore cannot be certified. I will fight for our people for the reasons I have just spoke about. Governor Inslee is not represent (inaudible) only himself. Thank you.
JUDGE LARRIPA: Thank you for your comment. And before our next speaker steps up, I will ask that you please keep all comments on the topic of the proposed project and with that, some of the comments

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have strayed off topic a little bit with regard to Justice Department criminal investigations or opinions about different political policies. This is an opportunity to comment on this project itself. So with that, would you please call our next speaker.
STAFF GRANTHAM: Delmar Eldred.
DELMAR ELDRED: I opposed this large scale solar project for Klickitat County. It's going to destroy the landscape, the farm culture, the loss of thousands of acres of tillable land will be gone forever, grazing area for cattle, wildlife, and the rainwater that runs off these panels releases cartagens and cadium into the soil, along with the erosion that pollute nearby streams and surface water. The increased risk of fire and health problems that come from the electromagnetic field, which severely affect some people. And it's called electromagnetic hypersensitive. The herbicides that are being used to prevent vegitational growth in these panels also contaminate and run -- the runoff water. And the water that it's going to take to clean millions of these panels twice a year.
These projects also limit the opportunity for economic growth, cause loss of farm service employment, and harm the quality of life for many people in future generations. If this agency's purpose is to ensure

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protection of the environmental quality and address the concerns the public has on the negative impact that these large scale solar projects have on the community, then I cannot see why you would approve something that has such a damming effect on the future of Klickitat county. Thank you.
JUDGE LARRIPA: Thank you, sir. And our next speaker.
STAFF GRANTHAM: Handy Magnison.
JUDGE LARRIPA: If you would, please still speak into the mic. The people that are joining us, either by telephone or online, that's the only way they'll be able to hear you. Thank you, ma'am.
CANDY MAGNUSON: Okay. Candy Magnuson, C-A-N-D-Y, M-A-G-N-U-S-O-N. Eight-two years old, 4 foot 11 and pissed off, okay. I don't have much time on this Earth but when I go, I hope that I have saved some of this beautiful property here in Goldendale and Centerville. You know, guys, I resent -- I resent this money, this new green deal money, coming from the government to pay for you guys, and nothing personal, your wages and stuff. Okay. And put our land in jeopardy. We're not going to have -- you know, I'm a farmer. There's farmers in here. We're not -- we got to have the hay for our horses, our cows, our goats, our

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everybody, okay. We send it out to foreign countries -- our hey goes out to foreign countries and stuff, too. But I'll tell you what, I've seen a lot of things in here and this is the saddest day that I've seen in my lifetime. I hope that you guys -- you guys are getting paid with our money, okay, because I pay taxes. I still pay taxes. And new green deal, that's tax money. And so I hope that you guys will take us serious here. Because we are serious here. We love our property. We love our land. We're related to a lot of people here and stuff. And the people that have signed up, I'm sorry. I'm sorry that you did because your ancestors are going to pay for it, and that's why I'm standing here to save my ancestors. Thank you.
JUDGE LARRIPA: Thank you, ma'am.
STAFF GRANTHAM: Russ Hanson.
RUSS HANSON: Russ Hanson, R-U-S-S, H-A-N-S-O-N. So, excuse me, trying to get this down to two minutes. My wife and I live immediately adjacent to this proposed project. From our front door we have a view of over 300 acres of solar panels, of new substations, and two acres of lithium-ion battery storage. Says there are nine homes immediately in our area that will be affected by this large-scale project. Today, I want to talk briefly about the visual impact

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assessment that was added as an addendum to this application. This assessment is incomplete and obviously weighted towards Cypress Creek who hired them to do it. I have numerous examples throughout the 59 page report, but only have time here to go over a couple, first being the key observation points. There were seven key observation points selected to be representative of the landscape of this project. The factors in considering these key observation points include locations with sensitive viewers, i.e. local residents and motorists. Yet not one local resident was included in the report. Furthermore, identifying groups of individuals that would likely be sensitive to visual change is an important part of the visual assessment process and determining this. Most being, the most critical viewpoints, i.e. views from community, residential areas, and recreation areas. Again, not one resident had a view assessment done and included in this report. Why is that? How can EFSEC make an informed decision on the visual impact assessment if they don't have all the information? I would request that this assessment by Tetra Tech not be considered by EFSEC and that EFSEC hire their own independent company to do a complete visual impact assessment. In conclusion, I just like to state that I'm not against solar. I just

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would like to see it sensibly sited. And next to homes is definitely not sensibly sited. Thank you.

JUDGE LARRIPA: Thank you, sir. And our next speaker, please.

STAFF GRANTHAM: Amy Hanson.

AMY HANSON: Amy Hanson, A-M-Y, H-A-N-S-O-N. Thank you for taking your time listening to comments. This is my life. This is our life. We bought a property 12 years ago, 40 acres. It was our dream retirement property. We never expected this to happen. The substation went in 6 months after we bought our property. We had no idea it was coming. We weren't advised, notified at all. There was nothing we can do about it at that point. We have a beautiful view. We have Mount Hood, Mount Adams, Mount Saint Helens. On a clear day, like today, to Mount Jefferson. Sweeping views of the Goldendale Valley and Simcoe Mountains. This is why we moved here. We're surrounded by beautiful farmland and country. We have the best neighbors in the world. We bought into a development, 20 acre parcels, 240 acres. We found out in 2020 when we retired and tried to buy an additional four acres after we sold our -- that it was -- the 100 acres that were not already purchased or lived on were leased to Cypress Creek. We had no idea that was coming. In

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addition to that there's going to be over two acres of battery storage within our development. Terrifying. I know that they say that they're the safest, you know, but still it's like everything's safe until something happens. You know, we moved here for the view, the farmland, the community. We shop local, you know, we go to the hospital local, you know, we get our car fixed local. I mean, we lived -- we moved here for the community. We wanna stay here. We don't wanna have to move. If we can even sell our property. We don't blame the people leasing. We know where they are. They're making a lot of money, but we're concerned about our property values, you know, and our quality of life and safety also. So please consider that in making your decision. Thank you.

JUDGE LARRIPA: Thank you, ma'am. Next speaker, please.

STAFF GRANTHAM: Dave Thies.

DAVE THIES: My name is Dave Thies, T-H-I-E-S, for Columbia Gorge Audubon Society. Klickitat County has been targeted as an energy sacrifice zone. When public sentiment turned against a corporate energy takeover of our county, that industry doubled down and brought to us their energy overlay zone, supposedly offered -- authored by our economic

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development director who just happened to come from renewable energy and returned to renewable energy when the EOZ was approved. That EOZ streamlined regulations and tellingly it greatly reduced public comment. Far less than 1% of local people spoke in favor of the EOZ and yet our county commissioners accepted a few boosters and proponents for county wide support. Considering the magnitude of the EOZ, it should have been put to a vote of the people, but our county leaders could not have allowed that because they knew it would never have -- it would have been decisively defeated. Federal, state, and county government all support and encourage renewable energy. They have legislated tax breaks and subsidized -- and subsidies for renewables. Federal and state wildlife agencies know that to oppose renewable -- renewables could be fatal to their budgets. We believe this is greatly hindered a much needed --

JUDGE LARRIPA: And, sir, I don't mean to interrupt and I'll -- we can pause and reset some of the time. The comments in this public hearing need to be related to this specific project. So if you can please narrow the scope of the comments to the same rather than generally about the projects. Once again, we'll go ahead and back up your time if you have additional remarks to make, sir.

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DAVE THIES: Micah, if you want to you can turn off this mic, but I'll tell you what, we all sat in this room for an hour while we had chit chat and now you've cut us down from three minutes to two minutes.

JUDGE LARRIPA: Sir, so --

DAVE THIES: You don't have to act on what we say, but you should listen.

JUDGE LARRIPA: Sir, if you'd like to make comments, we'll go ahead and restart your time. If your comments have concluded, then you may submit additional remarks in writing. Thank you, sir. Right. Would you please call the next speaker?

STAFF GRANTHAM: Joan Fry.

JOAN FRY: (Inaudible)share with you an expert on -- oh, come on -- I would like to share with you an excerpt from my testimony, the April 18th hearing before Klickitat County Commissioners regarding their solar moratorium. I was one of the signatories of the energy overlay and want to clarify the rationale and the process. Excuse me, wind power was headed our way, and we wanted to be prepared. The question was what did the citizens want in our county and where did they want it? We held numerous public hearings in all communities county wide. West end said no, thanks. The east end was supportive. Many saw the windmill income as an

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opportunity --

JUDGE LARRIPA: And, ma'am, I again -- and please pause the time. This is not a public information hearing regarding -- okay. Then you may please go ahead.

JOAN FRY: (Inaudible) then onto the board of county commissioners for more hearings and public process. Concurrently, we also did a full blown environmental impact study, which was lengthy, expensive, and more public process. Each wind power project still had to do site specific applications, just not an environmental impact study, which the county had already done. At that time, solar energy was nothing more than a rooftop panel -- solar panels. Given the rapid advances energy technology has been making, the 1996 EOZ should have been updated 15 years ago with as much citizen input as possible. As it stands, the EOZ doesn't address the magnitude of solar projects and their impacts in any way and shouldn't be considered a document that allows them. In addition to the statement made to the county commissioners, my message to this body is that Carriger Solar and future solar applications belong in the hands of the citizens through their elected county commissioners, and those decisions must be made according to county land use regulations.

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Thank you for your time.

JUDGE LARRIPA: Great. Thank you, ma'am. And just to clarify, when I'm referring to on topic and off topic, I'm not making any assessments of the relevance of the comments that people have in another form or in another place. Here today, though, the purpose of this informational meeting is very narrowly defined by statute RCW 80.50.090 and Washington Administrative Code 463-26-025. So this is your opportunity to comment about this project specifically.

I will need to interject if I hear further commentary about decisions of county commissioners and or broad policy as it pertains to project of this nature. All right. And there also -- there will be an additional land use hearing in this matter on May 15th. But once again, if the comments are general in nature about projects like this, I will need to interject to limit the scope of it. But with that, we do want to hear the comments that people have about this particular project. So would you please call our next speaker.

STAFF GRANTHAM: Gene Callan.

GENE CALLAN: Gene Callan, G-E-N-E, C-A-L-L-A-N. I live at 38 Knight Road adjacent to the project. I'm going to take my robust two minutes and look at the graphics on the screen and look at the

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impact, a graphic impact on our Goldendale Valley, what I think Carriger implies.

Next slide, please.

This is a map of that valley. You can see Goldendale in the middle, Centerville down below and the Columbia River to the south, Highway 97 running north and south. This is home over 8,500 people. We're a traditional rural town, and we're proud of our town. This is our home.

Next slide, please.

It's an agrarian valley. We have over 60,000 acres of farmland, irrigated and non irrigated. You've heard a lot about the RCW that demands that we honor and respect that farmland, and that applies here.

Next slide, please.

There are over a 100 miles of rivers, streams, swales, waterways that run through the Goldendale Valley, all feeding into the Little Klickitat and the Big Klickitat and finally the Columbia River. In addition to that, as the department of ecology knows, there are hundreds of domestic water wells out there. Ours being one, that's within 400 feet of our property line and this project, so that's a big issue for us.

Next slide, please.

The study -- and we recognize because we live

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there -- there are many species of animals and plants in this Goldendale Valley. Three of them, I believe, are a priority or a threatened status. One that wasn't mentioned and ignored is the Golden and the Bald Eagle, which every resident out there knows is in and around that valley. In addition to that, there -- we believe, there are some first foods, for example, the camas root, that lives in that valley -- in our valley.

Next slide, please.

This is the most important slide that I want to share with you. This is a graphic representation. I'd ask you to look at the little square on the right. That is a 641 section scale. And yellow graphically depicts nine to 10,000 aces and the Carriger Project will be a pilot project that will trigger all these others.

CHAIR DREW: Mr. Callan. Yeah. Thank you.

JUDGE LARRIPA: Thank you for your comment, sir.

CHAIR DREW: We will save the PowerPoint as a comment as well.

JUDGE LARRIPA: All right. Thank you. Please call the next speaker.

STAFF GRANTHAM: Mike Alleritt.

ELI LEVITT: Good evening, my name is Mike

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Alleritt, M-I-K-E, A-L-L-E-R-I-T-T. Thank you for the time to comment on this project. We do appreciate it. I'm here tonight speaking in favor of the project. The reason I'm speaking in favor of the project is I've seen the way that it's been helping in the rural communities throughout Washington, eastern Oregon, and eastern Washington.

It allows us as -- I guess, let me back up a little bit. So, I represent iron workers in the state of Oregon and five counties in southwest Washington. So I've seen the benefits to the members of the building trade affiliates that build these projects and the ability that it gives us as accredited apprenticeship programs to bring in people from the rural communities of eastern Washington and eastern Oregon. I think they're very important to be able to keep building the skilled workforce that we're going to need to move into the future with fossil fuels going away and renewable projects coming into play.

I think it's very important that we use our own local people to build these projects and not have people coming in from out of state to build these projects and, therefore, training our apprentices is very important. It also helps us get closer to that carbon neutral for the state of Washington. Thank you for your time. I

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appreciate it.

JUDGE LARRIPA: All right. Thank you for your comment, sir. And just once again, as a reminder, for speakers who are going to speak for the remainder of this evening, please tie your comments to this specific project. The next speaker, please.

STAFF GRANTHAM: David West.

DAVID WEST: Dave West, D-A-V-E, W-E-S-T. Unusual event this evening. I agree with all three of my commissioners all at the same time. I'm not against solar and I'm certainly not against solar being in our county. But as you're considering this project, I do believe you need to consider -- I looked at Gene's slides -- there's 8,500 people here. Only 3,500 people live in the city limits and that's the same population that was 40 years ago. All of our growth has been in the rural areas.

Now, land studies, real estate value studies, not paid for by the corporations indicate 20 to 30% drop in value, depending on where you're at. If you go forward to this, let's put a requirement they compensate the people for that drop in value.

Now, let's get down to brass tax. I used to work for a corporation that in the end, for over 20 years they're owned by one of the world's largest

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corporations. The bottom line is the bottom line. Cypress Creek is not in the business of making solar. They're in the business of making money. And the reason they wish to site here is because of the very short, cheap distance to connect to the substation.

Now, if they don't build here, if you choose to deny it, we have lots of room in this county without the conflicts, and it's all within the distance they have previously stated they can effectively build power lines in. We will not lose green energy projects. Our county will not lose money. We have the capacity for that 10,000 acres of solar production here. But maybe you can require them to spend more money and site it where we won't have the conflicts.

Almost out of time. I found their whole plan, that I actually believe to be a plan to have a plan, kinda like asking a high school student to grade his own term paper. Thank you.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Dave Barta.

DAVE BARTA: D-A-V-E, B-A-R-T-A. Good afternoon Council and Cypress Creek representatives. Thank you for the opportunity to speak today regarding the Carriger application. As you have heard, or will

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here, there's several significant reasons to reject the application. Most of my discussions centers on the poor fit of this project application is relative to local land use. Notably, the area proposed has been zoned extensive agriculture and general rural for decades.

In the Klickitat County's zoning ordinance, the purpose for extensive agriculture zoning is, I quote "to encourage the continued practice of farming on lands best suited for agriculture and to prevent or minimize conflicts between common agricultural practices and various non farm uses." In the case of nearly all the Carriger application, there is no continued practice of farming that can or will happen. In some cases, lessors have leased virtually all their ground. They have no intention to continue to farm it.

Similarly, the general rural zones purpose is, quoting "to maintain openness in the rural character of the countryside to protect the county's water and other natural resources, and to provide areas which are appropriate for typical rural development." The Carriger application states there'll be over 1,300 acres of industrial panels with an extended height of 12-1/2 feet on roughly 2,000 acre parcel. Carriger states they will surround most of the area with the six-foot-high chain link fence topped by barbed wire. This hardly

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gives the impression of, quoting "maintaining the openness and rural character of the countryside."

Additionally, the industrial solar developer hopes to place 63 megawatts of lithium-ion battery storage within about a 1000 feet of several residences, visualize dozens of semi-trailer-sized batteries. They say they are safe and they won't burn, but when something goes wrong, it goes really wrong and means evaluations of hundreds or maybe even a 1000 people and the negative effect on land. The battery storage site is about three quarters of mile north of where both forks of Blockhouse Creek come out of the ground and a couple miles north of the stream that feeds Goldendale Fish Hatchery.

Under GMA requirements, Carriger application will result in a land conversion. Klickitat County has zoning ordinances for a reason. This project does not meet them. Please reject the expedited application request.

CHAIR DREW: The timer. Yep.

ELI LEVITT: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Tom Holub.

TOM HOLUB: (Inaudible) 2006. My wife and

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I own four and a half acres. My property is not directly affected. I'm just outside of Goldendale. But we moved here for a very specific reason, and this may sound general, but this directly -- I intend to directly cite this project because we moved here for the natural beauty of this place. Shortly after we bought our place -- I'm going to get off topic there -- but what I basically wanna say is, we feel like the property values in this county are going to go down and the overall impact of this project is not going to benefit this county. I mean, we need to see some economic benefit from this type of a project in our county. There's no other reason to despoil our natural beauty. And for that reason, I asked that the Council recommend to the government -- Governor that this project not move forward.

JUDGE LARRIPA: Thank you for your comment, sir, and before you step away, would you please spell your name for the record.

TOM HOLUB: I'm sorry.

JUDGE LARRIPA: No problem at all.

TOM HOLUB: Tom Holub, T-O-M, H-O-L-U-B.

JUDGE LARRIPA: Thank you. And please call our next speaker.

STAFF GRANTHAM: Kenneth McKune.

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ELI LEVITT: K-E-N-N-E-T-H, M-C-K-U-N-E.

Welcome to Goldendale, the golden gate to the Evergreen State, not the golden gate to the solar mistake. It will be a big mistake to site Carriger in the area that they're proposing. You've heard a lot of arguments that back that statement up. One thing, the whole green energy movement is like the whole clean -- is like smoke and mirrors, in a way. And it's like trashing the planet. Siting these things in places, that changes the complexion, the face of the landscape. Thousands of people are going to be affected every day. It's not like the other end of the county where maybe two people live within two or 3,000 acres. Here on Knight Road, we're all going to be seeing it all the time. And, you know, I'm not totally against solar. I mean, I'd love to see -- those are my friends out there. I've known them most of my life. I'd like to see them benefit from the technology. But the scope and the scale is -- it just doesn't fit. We're a rural county, a rural community, we don't really need the glitz and the glamour of becoming the energy center of Washington state and feed the megalomaniac governor that wants to impose --

JUDGE LARRIPA: And sir, the road that you're heading down, we need to contain the comments on.

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KENNETH MCKUNE: I apologize for going off track. I'm done. Thank you.

JUDGE LARRIPA: All right. Thank you, sir. Next, speaker please.

STAFF GRANTHAM: Apologies. James Wilson.

JAMES WILSON: James Wilson, J-A-M-E-S, Wilson W-I-L-S-O-N. I'm probably the bad guy here. I was the General Foreman on the Lund Hill Project for the iron workers. I'm not saying that this project is located in the right area. What I will say is there is some short term -- there are some benefits to the construction of it. While we were working on Lund Hill, we had approximately seventy people working those -- a lot of the -- some of the people live here, some of the people -- most of the people, came from out.

The store. A lot of small businesses benefited from them living here during the week. A lot of the money made, stayed in this community. And it helps a lot of small businesses. And, again, I don't know about the location of this project, but the project will have benefits. And it seems like everybody that comes up here, nobody gives it credit. But anyway, also we while we were here, we took in some workers from local areas, and it gives a chance, to the people that might not get a chance, to earn a living wage job. The iron workers

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is a career where, if you work there for 30-35 years, you get to retire with a decent retirement, and it just benefits the community as well. Thank you.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Ryan Mo.

JUDGE LARRIPA: We can also go to the next speaker and then give him an opportunity when he comes back in. Just next in line.

STAFF GRANTHAM: Okay. That'd be Rocel Dimmick.

ROCEL DIMMICK: Good evening. I'm Rocel, R-O-C-E-L, Dimmick, D-I-M-M-I-C-K. And I am a resident here in Klickitat County, and I will be one of the residents closest to the battery storage facility. And looking through your project and your proposal, I didn't catch what kind of brand that battery was that's going to be utilized and how it's going to be recycled. And where can I find these studies that they're safe for residents? I see that you just say it, but I don't see any studies that support this. Where's the cradle-to-grave reports on these?

What determined the location of the battery? Typically, the winds will blow from the west side, and that's where it's located on the west side of the

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substation. So if it were to explode or catch fire, wouldn't that just make the fire even more difficult to address? And there was a fire at one of these facilities actually in September of last year, and it was in Alcorn, California. And I just wanna know, like, what the plan is for residents when this happens and there's toxic smoke going into our air and it's blowing towards Goldendale. Where is that report that it's safe? Where's those studies? Why aren't they included in your proposal.

In your evacuation plans, you mention that the fire departments have all been, you know, onboard and working with you, but we didn't see that happen with Lund Hill. They didn't address what our community might have to do in case of an emergency where these battery storage facilities would happen to catch on fire. And these are widely used in South Korea. And it turns out that in a 2-year period there were 23 fires at these battery storage facilities. So I'm not too excited about living next to your project, especially when I don't have the facts that are backing up your proposals and how you can just assure that it's going to not affect my air quality when you strip the topsoil down. And I witness --

CHAIR DREW: That's time.

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ROCEL DIMMICK: -- the 50 mile an hour winds that go through this county.

CHAIR DREW: Your two minutes have been up.

ROCEL DIMMICK: I really hope that you guys consider all of these --

JUDGE LARRIPA: All right. Please conclude your comments with time having concluded. Also, because you had a number of questions for the applicant, if you would like to leave a number or contact information, completely your choice, you may take a moment to leave that with him. Okay. All right.

And with the next speaker, I know that the person who you called just before our last speaker had stepped outside, would you please call that speakers name again? I'm sorry my misunderstanding. I thought you meant he had stepped outside momentarily. So then please go to the next name on the list.

STAFF GRANTHAM: Aubrey Newton.

AUBREY NEWTON: Good evening. Can you hear me okay? I'm joining virtually.

JUDGE LARRIPA: Yes. We can hear you.

AUBREY NEWTON: Wonderful. Aubrey Newton, A-U-B-R-E-Y, N-E-W-T-O-N. Good evening and thank you Chair Drew and the entire commission for the opportunity

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to speak this evening. My name is Aubrey Newton. I am the Director of the Northwest Laborers'-Employers Cooperation and Education Team. I work with the Laborers' International Union of North America for the northwest region, which encompasses nine states in the northwest and provinces in the western Canada area, which includes Washington state. In Washington specifically, we have over 15,000 members in the state.

I won't get into the full details due to the stake of keeping on topic, but our members have worked in many projects in the southwest Washington area, and we are very much in support of this project. We are here in -- this evening -- in favor of this project, and we look forward to seeing how Cypress Creek will work with communities in the area to ensure that under represented workers are included and locals are given -- local workers are given the opportunity to build Washington's energy goals.

Our members, specifically in this area, have very large experience being trained and ready to handle over 60% of the entire project from material handling, concrete work, and many other scopes of work throughout the project that we've done throughout southwest Washington and specifically in the Goldendale community. And with that, overall, our members deserve to work on

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projects like these, and our members deserve to work for contractors and developers that value union's good paying jobs and building communities in all sectors. With that, thank you for your time.

JUDGE LARRIPA: Great. Thank you for your comment. And I will ask that people please don't remark while other speakers are speaking. I am screening comments for whether or not they're on topic, and I'll make that determination. I will ask people to please remain silent while other people are speaking. Thank you. Next speaker.

STAFF GRANTHAM: Justin Sellars.

JUSTIN SELLERS: Justin Sellars, J-U-S-T-I-N, S-E-L-L-E-R-S. Thank you, commission. Appreciate the time to be able to speak to you and -- I am on behalf of this project itself. I represent members of this community. I am the President of Labor Union International North America LIUNA Local 335. I'm representing the membership here, and we represent hundreds of hard working men and women in the southwest Washington area, as long as in Klickitat County itself. Our members build and construct all forms of energies, dams, winds, and solar projects from start to finish.

I'm here this evening to advocate for this project and support it in full. Furthermore, we're here

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to be on the representation of apprenticeship utilization, contractor compliance, diversity equity goals, and CETA requirements. We look forward to working with Cypress Creek in employing local hire, in giving great living-wage jobs, and building the future of Klickitat County. Thank you for your time. Appreciate it.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Jim Hill.

JIM HILL: Jim Hill, J-I-M, H-I-L-L. You know, as a gosh, the things I've heard today. As a fourth generation landowner on this property, I am angry and disappointed that the people who lived here a couple of years, 10 years, few months, are trying to dictate what we fourth, fifth, sixth generation landowners can legally do with our property. And, yes, I am one of those money mongers property is on my or the project -- Carriger Project is on, excuse me, my property.

You know, I've heard a lot of emotion today, but really not much fact about the Carriger Project. Nineteen to 30 million dollars in taxes. Why would the county turn that down? As Dave said earlier, the population of Goldendale is 3,600, more or less same as it was 40 years ago, but the population has grown to

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8,500. Where are those houses? They're on farm ground. I can have -- I could legally put 21 houses on my property. Each one of those houses will have a well into the aquifer. Another straw in the bottle. It's not an unlimited supply. I lost my train of thought. And so, you know, I don't know -- I don't know what my kids and grandkids are going to do. But, like I say, there could very easily be 21 houses. Farmland is gone forever. The project, 20-30 years, farmland is (inaudible) and Goldendale must thrive and prosper in the meantime.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Karl Amidon.

KARL AMIDON: So I guess I'm kinda (inaudible). Karl Amidon, K-A-R-L, A-M-I-D-O-N. Okay. I guess I'm kind of the bad guy here from what it sounds like. I'm right in the middle of this project. Been on Knight Road for 71 years and almost 72. Don't plan to leave. It's going to be right around -- right around me. I've farmed in this community my whole life. I've struggled. No one has ever paid my taxes for me. No one has ever offered to help. We've done it ourselves. We've stayed here on Knight Road. When my folks came here there was 10 farms on Knight Road. There's one

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today. Not that we own all the land. I wish I did, but we don't, but we do farm quite a bit of it. And the development of all these people moving in here, that's what's causing our problem. At least the solar panels -- there's a fence around it -- and there's no people, no problems. Thank you.

JUDGE LARRIPA: Thank you, sir.

STAFF GRANTHAM: Elaine Harvey.

ELAINE HARVEY: Elaine Harvey, E-L-A-I-N-E, H-A-R-V-E-Y. Today I speak as a resident of Klickitat County. I lived here most of my life, except the time when I went to college. I'm also speaking as a Kah-milt-pah band member, which is the Rock Creek band. We are the first people of this land. I live in this direct vicinity of the Carriger Project. I decided to live there because our first foods are there. I can walk out my door and I can pick some fresh food. I can go down the road. I can pick berries that are native. I have concern for the native plants, the native insects, the native wildlife that's going to be affected.

And we always speak on behalf of those who cannot speak for themselves. And that's why I work in natural resources. I have a bachelors degree in fisheries and aquatic sciences. I have a master of

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science degree in environmental law, hydrology, and geomorphology, and I'm working on my PhD in natural resources. I dedicate my life to natural resources and our first foods and our cultural resources. And this project will be detrimental to all the organisms that live in this area. I see them on a daily basis. This guy back here says, he only sees four deer. I don't. I live there. I see all the wild life. I know what's there.

And, you know, this project is like the worst nightmare that I can ever have in my life because I know what it's going to do to this land, to the community, and it's going to build off from this project more and more in this area, which is a really important culturally area for the Yakamas and for the Kah-milt-pah band which is one part of the tribes that make up the Yakama. So, you know, I'm speaking on behalf of those who can't speak for themselves.

JUDGE LARRIPA: Thank you, ma'am. Next speaker, please.

STAFF GRANTHAM: Kyle Hanson.

KYLE HANSON: Kyle Hanson, K-Y-L-E, H-A-N-S-O-N. I'm here on behalf of Ironworkers Local 29. Just wanted to assure the committee that they have competent and plenty of workers to complete this job

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with trained skills and experience and historic procedures and to get the job done correctly and by the deadline. While we're here to support -- we support the community and the local revenue. We also support whatever local infrastructure is being given to progressing America. If this project does happen, I encourage to use Local 29 workers, as they say -- set their standards, excellence, high and take pride in our work. Thank you.

JUDGE LARRIPA: Thank you, sir. Next speaker.

STAFF GRANTHAM: Dana Peck.

DANA PECK: My name's Dana Peck, D-A-N-A, P-E-C-K. I'm the retired Director of Economic Development for Klickitat County and managed the energy overlay process in the late 1990s and early 2000s. I'm also the guy Dave was talking about who came here doing wind projects and went off and did them again after the industry came back. So you need to face for that story, it's my face. Typically I stand up and agree with Commissioner Fry and then sit down and say thank you.

The two things I like to point out that you've heard tonight that I think speak well of Carriger is what they bring to us in terms of tax benefits. Keeping a small county healthy is not easy. Depending on how

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you count it, they're worth about a million dollars a year to the immediate small districts around us. You can -- and that's about as good a price on the value of view as you can get.

I'm much more in agreement with Jim Hill and the landowners. One of the reasons we did the energy overlay zone originally was to keep houses off the farm ground. We knew with our timber industry dying, with the smelter closing, that the only way we had to keep our landowners healthy was find a competitive advantage. And as commissioner Fry said, initially it was wind, it became solar.

I wish the county would've updated its Energy Overlay Zone we worked on when that started to happen, just like we did when we saw wind start to happen. And in my opinion, that's why you exist. You know, if the county would've updated itself, we wouldn't be having this conversation or this meeting. It would all be under the Energy Overlay Zone, which is very successful, handled almost two gigawatts of green power in the county. Thanks for your time.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Warren Dazey.

WARREN DAZEY: Good evening.

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JUDGE LARRIPA: And please state and spell your name, sir, for the record.

WARREN DAZEY: Warren Dazey, W-A-R-R-E-N, D-A-Z-E-Y. First, I wanna say I'm in full support of the construction workers, the laborers, and the iron workers, and I can think they could get some pretty good jobs somewhere else. This project that you're proposing, the 300 jobs that's going to bring in, everybody in this room knows they're coming from out of state or out of the area, so that's a no brainer. When the job's done, they leave. The project stays here. When the projects done, how do you get rid of it? You can't eat solar panels.

Most of what I was going to say has previously been covered, but my wife and I live on 44 acres on Pine Forest Road. We have an amazing view. It's a million dollar view, same as the Hanson's. And this project backs right up to our property, and that's going to drop our property value right through the cellar. So as far as, does it hurt the local citizens? You but it does. And it's not just me. There's a lot of other folks that's adversely affected with this project.

A little while back we had a county commissioners meeting with them, and there are several times people brought up they come up out of the gorge,

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they see this valley, and they feel like they're in God's country. Well, why would we wanna cover God's country with solar panels? Is it because we don't believe in God or we just don't have any respect for him? Thank you.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Tom Tasto.

TOM TASTO: Tom, T-O-M, and the last name is Tasto, T-A-S-T-O. I want to build on Delmar Eldred's comments on water runoff. And also I want to touch briefly on what Dana Peck had to say, and I hope you'll accept what I'm about to say because it's out of state. Okay.

The Virginia Department of Environmental Quality as of late March is now regulating stormwater from solar farms to include the panels themselves. Previously only the foundations or bases under the each panel was considered impervious. But under Governor Glenn Youngkin's administration, the panels themselves will be now classified as impervious as well. The rain hitting the panels causes concentrated flow erosion as it drips off the panels.

The previous administration of Governor Ralph Northam had ignored existing stormwater management guidelines in their efforts to prioritize or fast track solar projects. They ignored concerns that have continued to be raised by local officials and key stakeholders, of which we have a lot of here in this room.

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I have worked as a soil conservation technician, so I know a little bit about concentrated flow and runoff and things like that. The Energy Overlay Zone needs to be revised. We really cannot proceed with this project without the revision of the Energy Overlay Zone. Dana said it was done back in 1996 when solar was not even a gleam in her eye. So anyway, I don't think it's a good idea. I wouldn't be standing here if I did, but thank you.

JUDGE LARRIPA: Right. Thank you, sir. Next speaker, please.

STAFF GRANTHAM: Mike Tobin.

MIKE TOBIN: M-I-K-E, T-O-B-I-N. I'm not from this community. I wish my community in Yakima had shown up like this. What I'm really impressed by is the idea that forward thinking of the county itself considering green energy, including this. This action should fall under that from what little information I've garnered today. I do not know why EFSEC is participating in this at this time. I will say that is

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independent and different from what has been stated today is there are always mitigation elements of projects like this. There is a loss of agricultural land that is not being mitigated for. It must be included. I think that it should be a requirement that the Washington Department of Agriculture be here supporting the loss of agricultural land through a mitigation process, just like any other wildlife habitat. You can't replace this, but you can sure protect other areas that are vital to the county through use of conservation easements. So I'd offer that as another positive comment to this -- to this fine group. And, again, I applaud everyone who has spoken today. It is interesting to see the diversity, and I hope -- wish the best of luck for you here.

JUDGE LARRIPA: Thank you, sir. Next speaker, please.

STAFF GRANTHAM: That is the end of the speakers who signed up.

JUDGE LARRIPA: So if there are others in the room who've not yet spoken, Chair Drew indicated that because we have 10 minutes left, we'll invite you to do so. I see -- this was the first hand up and then I see a second hand up and a third.

SHELLEY WESTLUND: Shelley Westlund,

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S-H-E-L-L-E-Y, Westlund, W-E-S-T-L-U-N-D. I came to Klickitat County in 2010. I wanna first say that I'm extremely proud to be a Klickitat community member. And I am so proud of my community right now, today, and how they have spoken up. I have land that I believe 160 acres of it is being proposed. I have interest in that land. I don't own it out right in process of purchasing it. And I have, I think, part of those owners are considering putting solar panels on that upper piece. I believe that would be a horrid use of our land for all the reasons that have been spoken today, including, we have runoff water that comes down through that land and goes straight into the Little Klickitat River. I agree that we solar energy can be awesome. I plan to have solar on my home. However, where you are proposing to do this Carriger project is absolutely inappropriate for our county, for our lands, for our people, for every single reason. We have other places that would be more appropriate for solar. And I really hope that you will really listen to all of us and that this is not appropriate on any way. I wish I had known that we could speak today I would be more prepared, but I couldn't let the opportunity go by. I know there other people that want to speak, and I hope that we can be in agreement that we can do good things without harming our

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animals, our waterways, and our land. Thank you.

JUDGE LARRIPA: Thank you, ma'am. And yes, please go ahead and step up to the podium and state and spell your name for us.

LOCAL 335 SPEAKER: I'm here on behalf of the Laborers Union 335. I want this to happen. The community needs to have more things for people workwise, or we will have to travel to someone else's area to get work. I did it for years. I installed oil and gas pipelines for over 12 years. This is the new stuff, and I'd like to be able to stay home, which I live here, to be able to do my work for once.

JUDGE LARRIPA: And I saw one last hand. Please go ahead and step up, sir.

CARL CONROY: Carl Conroy, C-A-R-L, C-O-N-R-O-Y. I'm one of the bad guys. I have (inaudible) solar (inaudible) with the commissioners, as Dan knows. There are some things we really agree on. I'm a firm believer that solar is like a crop of grain, it needs to be harvested. But my main contention is, what is done when it's over with. That's the commissioner's job and your job to make sure that when that solar company leaves, and if they do, that land is returned to normal. That all comes to part. Mostly I wanna thank the opposition. I appreciate you guys. I

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appreciate that everybody's been here. We can disagree, and I really appreciate that. I too am a pretty much pure food and drug guy. We've talked at length about chemical use on this ground. I propose sheep grazing. They have been very receptive to it, that we can graze that and use maybe do that instead of all the chemical use for weeds. So while I think there are a lot of room for discussion and some things that we need to do, I do believe that with the commissioners and these people, that compromise can be reached. I really appreciate your time. I appreciate everybody showing up and the way we've conducted ourselves. Thank you.

JUDGE LARRIPA: Thank you, sir. And so now we'll go ahead and move to participants online. This is an opportunity. We have time to hear from up to three additional speakers. If you're on Teams, please go ahead and raise your hand and staff will identify the order. And I see you, sir, if we have time after online. Has anybody online indicated a desire to speak? All right. Then, sir, please go ahead and step up to the podium and state and spell your name.

KEN BRANHAM: K-E-N, B-R-A-N-H-A-M. I'm an iron worker. I've worked on several of these projects around here. I have actually put two kids through college. I lived the American dream by building

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windmills, all this stuff. And I live close by and this is green energy. It don't get no really any better. I've worked on power houses that are filthy and dirty and this -- and it's -- it can be reclaimed, just like this gentleman says. So when this is all done, they come in, put some new topsoil down, and you got -- basically you can run cattle on it. You can farm it. You can do whatever you want.

But we gotta do this because it helps out a lot of people. Not just me financially. But it's going to help out the community. It's going to turn on lights. This area is going to grow and there's going to be more homes out there. You know, it ain't just going to be farm ground everything. There's going to be more homes that are built in the area and these things can turn the lights on. Thank you.

JUDGE LARRIPA: All right. Thank you, sir. All right. So at this time, we're going to conclude public comment. No. At this point, ma'am, the public comment has concluded, but thank you for -- if you do have anything else, so please feel free to sit -- submit written remarks. Chair Drew.

CHAIR DREW: Thank you all for participating tonight. We appreciate hearing from all of you, and this meeting is adjourned.

CERTIFICATE

I, Steven B. Crandall, certify that the foregoing transcript is a full, true, and accurate transcription of the proceedings and testimony taken in the matter of the above-entitled proceeding.

That the foregoing meeting was taken before me, via Teams video conference, completed on April 25, 2023, and thereafter transcribed by me;

That I am not a relative, employee, attorney, or counsel of any party to this action, or relative, or employee of any such attorney or counsel, and that I am not financially interested in the said action or the outcome thereof;

IN WITNESS WHEREOF, I have hereunto set my signature on this 10th day of May, 2023.

Steven B. Crandall, CER
Certified Electronic Reporter #1198

EFSEC Monthly Council Meeting – Facility Update Format

Facility Name: Kittitas Valley Wind Power Project
Operator: EDP Renewables
Report Date: May 1, 2023
Reporting Period: April 2023
Site Contact: Eric Melbardis, Sr Operations Manager
Facility SCA Status: Operational

Operations & Maintenance (only applicable for operating facilities)

- Power generated: 20,481 MWh
- Wind speed: 6.3 m/s
- Capacity Factor: 28%

Environmental Compliance

- No incidents

Safety Compliance

- Nothing to report

Current or Upcoming Projects

- Nothing to report

Other

- No sound complaints
- No shadow flicker complaints

EFSEC Monthly Council Meeting – Facility Update

Facility Name: Wild Horse Wind Facility
Operator: Puget Sound Energy
Report Date: May 5, 2023
Report Period: April 2023
Site Contact: Jennifer Galbraith
SCA Status: Operational

Operations & Maintenance

April generation totaled 48,360 MWh for an average 24.64%.

Environmental Compliance

Nothing to report.

Safety Compliance

Nothing to report.

Current or Upcoming Projects

Nothing to report.

Other

Nothing to report.

Chehalis Generation Facility
1813 Bishop Road
Chehalis, Washington 98532
Phone: 360-748-1300

EFSEC Monthly Council Meeting – Facility Update

Facility Name: Chehalis Generation Facility
Operator: PacifiCorp
Report Date: May 4, 2023
Reporting Period: April 2023
Site Contact: Mike Adams, Plant Manager
Facility SCA Status: Operational

Operations & Maintenance
-Relevant energy generation information, such as wind speed, number of windy or sunny days, gas line supply updates, etc.

- 141,641 net MW-hrs. generated in the reporting period for a capacity factor of 39.44%.

The following information must be reported to the Council if applicable to the facility:

Environmental Compliance
-Monthly Water Usage: 2,087,668 gallons
-Monthly Wastewater Returned: 916,202 gallons
-Permit status if any changes.

- No changes.

-Update on progress or completion of any mitigation measures identified.

- Nothing to report

-Any EFSEC-related inspections that occurred.

- Nothing to report

-Any EFSEC-related complaints or violations that occurred.

- Nothing to report

-Brief list of reports submitted to EFSEC during the monthly reporting period.

- Nothing to report

Safety Compliance
-Safety training or improvements that relate to SCA conditions.

- Zero injuries this reporting period for a total of 2830 days without a Lost Time Accident.

PACIFICORP
A BERKSHIRE HATHAWAY ENERGY COMPANY

Current or Upcoming Projects

-Planned site improvements.

- No planned changes.

-Upcoming permit renewals.

- Nothing to report.

-Additional mitigation improvements or milestones.

- Nothing to report.

Other

-Current events of note (e.g., Covid response updates, seasonal concerns due to inclement weather, etc.).

- Upgraded emissions monitoring systems for both combustion turbine units. Currently in the process of certification.

-Personnel changes as they may relate to EFSEC facility contacts (e.g., introducing a new staff member who may provide facility updates to the Council).

- Nothing to report.

-Public outreach of interest (e.g., schools, public, facility outreach).

- Nothing to report.

Respectfully,

Mike Adams
Plant Manager
Chehalis Generation Facility

EFSEC Monthly Council Meeting – Facility Update

Facility Name: Grays Harbor Energy Center
Operator: Grays Harbor Energy LLC
Report Date: May 16, 2023
Reporting Period: April 2033
Site Contact: Chris Sherin
Facility SCA Status: Operational

Operations & Maintenance
-GHEC generated 400,577MWh during the month and 1,325,627MWh YTD.

The following information must be reported to the Council if applicable to the facility:

Environmental Compliance
-There were no emissions, outfall, or storm water deviations, during the month.
-Routine monthly, quarterly, and annual reporting to EFSEC Staff.
- Monthly Outfall Discharge Monitor Report (DMR).
- Quarterly Stormwater Discharge Monitor Report (DMR).
- Quarterly Air Emissions Data Report (EDR).

Safety Compliance
- None.

Current or Upcoming Projects
-- Application for a Modification to the Air Operating Permit submitted to EFSEC in April 2022. GHEC is currently authorized to operate under PSD Permit EFSEC/2001-01, Amendment 5 and Federal Operating Permit EFSEC/94-1 AOP Initial.

Other
-None.

EFSEC Monthly Council Meeting

Facility Name: **Columbia Generating Station (CGS) and Washington Nuclear Projects 1 and 4 (WNP 1/4)**
Operator: **Energy Northwest**
Report Date: **May 4, 2023**
Reporting Period: **April 2023**
Site Contact: **Mary Ramos**
Facility SCA Status: (Pre-construction/Construction/Operational/Decommission) **Operational**
CGS Net Electrical Generation April 2023: **689,237.85 MWh**

Environmental Compliance
No non-routine items to report.

Safety Compliance
None.

Current or Upcoming Projects
None.

Other
None.

Issuance Date: _?_
Effective Date: _?_
Expiration Date: _?_

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT WA0025151

State of Washington
ENERGY FACILITY SITE EVALUATION COUNCIL (EFSEC)

PO Box 43172
Olympia WA 98504-3172

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The State of Washington Energy Siting Law
Chapter 80.50 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1342 et seq

Energy Northwest Columbia Generating Station
PO Box 968
Richland, WA 99352-0968

is authorized to discharge in accordance with the Special and General Conditions that follow.

Facility Location: HANFORD - T11N R28E SEC 5

Industry Type: Steam-Electric Power Generation

Treatment Type: Disinfection, neutralization, filtration, ion exchange

Receiving Water: Columbia River

SIC Code: 4911

NAICS Code: 221113

Kathleen Drew, Chair
Energy Facility Site Evaluation Council

Note: All linked citations in this permit are understood to be as of the permit issuance date. A list of links by citation is included as an attachment in Appendix B.

SUMMARY OF PERMIT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Table 1 – Summary of Permit Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S3.A	Discharge Monitoring Report (DMR)	Monthly	
S3.A	Discharge Monitoring Report (DMR)	Annual	
S3.A	Permit Renewal Application Monitoring Data	1/permit cycle	
S3.F	Reporting Permit Violations	As necessary	
S4.A	Update to Operations and Maintenance Manual – Cooling Water System	1/permit cycle	
S4.A	Update to Operations and Maintenance Manual – Evaporation Ponds	1/permit cycle	
S4.B	Reporting Bypasses	As necessary	
S5.C	Modification to Solid Waste Plan	As necessary	
S6	Application for Permit Renewal	1/permit cycle	Insert date from S6
S7	Non-Routine and Unanticipated Discharges	As necessary	
S8	Modification to Spill Plan	As necessary	
S9	Modification to Stormwater Pollution Prevention Plan	As necessary	
S10	Outfall Evaluation	1/permit cycle	
S11	Acute Toxicity Effluent Test Results - Submit with Permit Renewal Application	Once	
S12	Chronic Toxicity Effluent Test Results with Permit Renewal Application	Once	
S13	CWIS Certification Statement and Report	Annual	
G1	Notice of Change in Authorization	As necessary	
G4	Permit Application for Substantive Changes to the Discharge	As necessary	
G5	Engineering Report for Construction or Modification Activities	As necessary	
G7	Notice of Permit Transfer	As necessary	
G10	Duty to Provide Information	As necessary	
G21	Compliance Schedules	As necessary	

SPECIAL CONDITIONS

S1. Discharge Limits

S1.A. Process Wastewater Discharges

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit violates the terms and conditions of this permit.

There shall be no discharge of wastewater of radioactive materials in excess of the limitations on radioactive effluents established by the Nuclear Regulatory Commission in the facility operation license and in 10 CFR Parts 20 and 50.

Beginning on the effective date of this permit, the Permittee is authorized to discharge circulating cooling water blowdown, service water system blowdown, and radioactive wastewater treatment system effluent to the Columbia River at the permitted location subject to complying with the following limits:

Table 2 – Effluent Limits: Outfall 001

Latitude: 46.47139 Longitude: -119.26250

Parameter	Average Monthly [a]	Maximum Daily [b]
Flow	5.6 million gallons/day (MGD)	9.4 MGD
Total Residual Halogen (TRH) [c]	Not applicable	0.1 milligrams/liter (mg/L)
Chromium (Total)	8.2 micrograms/liter (µg/L)	16.4 µg/L
Zinc (Total)	53 µg/L	107 µg/L
The 126 priority pollutants (40 CFR 423 Appendix A) contained in chemicals added for cooling tower maintenance, except chromium and zinc	No detectable amount	No detectable amount
Polychlorinated biphenyl compounds (PCBs)	No discharge	No discharge
Heat Load (June through October only)	1.27E+09 kilocalories per day (kcal/day)	N/A

Parameter	Minimum	Maximum
pH [d]	6.5 standard units (s.u.)	9.0 s.u.

Table 2 Footnotes:

[a] Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured.

Table 2 Footnotes continued:
[b] Maximum daily effluent limit is the highest allowable daily discharge. The daily discharge is the average discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, calculate the daily discharge as the total mass of the pollutant discharged over the day. The average daily measurement does not apply to pH or temperature.
[c] In the event of an equipment failure, CGS may operate using a batch halogenation process of the cooling water system. When the batch halogenation process is utilized, the circulating water blowdown isolation valves must be closed during biofouling treatments and remain closed until the concentration of total residual halogen is less than 0.1 mg/L for at least 15 minutes.
[d] When pH is continuously monitored, excursions between 5.0 and 6.5, or 9.0 and 10.0 are not considered violations if no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 26 minutes per month. Any excursions below 5.0 and above 10.0 at any time are violations.

S1.B. Mixing Zone Authorization

Mixing Zone for Outfall 001

The following paragraphs define the maximum boundaries of the mixing zones.

Chronic Mixing Zone

The width of the chronic mixing zone is limited to a distance of 175 feet (53 meters). The length of the chronic mixing zone extends 100 feet (30 meters) upstream and 308 feet (94 meters) downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The mixing zone must not utilize greater than 25% of the flow. The concentration of pollutants at the edge of the chronic zone must meet Chronic Aquatic Life Criteria and Human Health Criteria.

Acute Mixing Zone

The width of the acute mixing zone is limited to a distance of 18 feet (5 meters). The length of the acute mixing zone extends 10 feet (3 meters) upstream and 31 feet (9 meters) downstream of the outfall. The mixing zone extends from the bottom to the top of the water column. The acute mixing zone must not utilize greater than 2.5% of the flow. The concentration of pollutants at the edge of the acute zone must meet Acute Aquatic Life Criteria.

Table 3 – Dilution Factors

Criteria	Dilution Factor
Acute Aquatic Life Criteria	9
Chronic Aquatic Life Criteria	93
Human Health Criteria - Carcinogen	93
Human Health Criteria - Non-carcinogen	93

S2. Monitoring Requirements

S2.A. Monitoring Schedule

The Permittee must monitor in accordance with the following schedule and the requirements specified in Appendix A.

Table 4 – Circulating Water Blowdown (Outfall 001)

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Flow	MGD	Continuous [a]	Metered/Recorded
pH [b, c]	standard units	Continuous	Metered/Recorded
Total Residual Halogen (TRH) [d]	mg/L	Continuous	Metered/Recorded
TRH	mg/L	2/treatment, as needed [e]	Grab [f]
Temperature [g]	degrees Celsius (°C)	Continuous	Measurement
Heat Load [h]	kcal/day	Monthly [i] (June through October)	Calculated
Chromium (Total)	µg/L	1/month	24-Hour Composite [j]
Zinc (Total)	µg/L	1/month	24-Hour Composite
Cyanide (Total)	µg/L	Once per year	Grab
Total Phenolic Compounds	µg/L	Once per year	Grab
Oil and grease	mg/L	Once per year	Grab
Chromium (hex), dissolved	µg/L	Once per year	24-Hour Composite
Priority Pollutants (PP) – Total Metals [k]	µg/L; nanograms/liter (ng/L) for Mercury	Once per year	24-Hour Composite Grab for Mercury
PP – Volatile Organic Compounds	µg/L	Once per year	Grab
PP – Acid-extractable Compounds	µg/L	Once per year	24-Hour Composite
PP – Base-neutral Compounds	µg/L	Once per year	24-Hour Composite
PP - Dioxin	picograms/liter (pg/L)	Once per year	24-Hour Composite
PP – Pesticides/PCBs	µg/L	Once per year	24-Hour Composite

Table 4 Footnotes:

[a] Continuous means uninterrupted except for brief lengths of time for calibration, power failure, or unanticipated equipment repair or maintenance. The time interval for the associated data logger must be no greater than 30 minutes. Sample once per day when continuous monitoring is not possible.

[b] Report the instantaneous maximum and minimum pH monthly. Do not average pH values.

Table 4 Footnotes continued:
[c] Record and report: The number of minutes the pH value measured between 5.0 and 6.0 and between 9.0 and 10.0 for each day; total minutes for the month; and the monthly instantaneous maximum and minimum pH. If multiple excursions occur during the day, note the duration for each excursion in the notation field in the parameter notes.
[d] Report maximum daily concentration of TRH.
[e] Conduct batch sampling procedure before discharging in the event the continuous monitor becomes inoperable for any reason.
[f] Grab means an individual sample collected over a fifteen (15) minute, or less, period.
[g] Conduct temperature grab sampling when the effluent is at or near its daily maximum temperature, which usually occurs in the late afternoon. If measuring temperature continuously, report a daily maximum from half-hour measurements over a 24-hour period. Continuous monitoring instruments must achieve an accuracy of 0.2 degrees Celsius and the Permittee must verify accuracy annually.
[h] The average monthly heat load is calculated using the following formula: [average monthly temperature (°C)] x [average monthly flow (MGD)] x [3.78×10^6]. The average monthly temperature is the sum of average daily temperatures divided by the number of daily discharges measured in the month. The average monthly flow is the sum of all flows in the month divided by the number of days in the month.
[i] Monthly means once every calendar month.
[j] Twenty-four (24)-hour composite means a series of individual samples collected over a 24-hour period into a single container and analyzed as one sample.
[k] Priority Pollutant Scans for Total Metals must use total recoverable metal laboratory methods for all parameters except for hexavalent chromium. The 40 Code of Federal Regulations (CFR) 136 method for hexavalent chromium measures only its dissolved form.

Table 5 – Permit Renewal Application Requirements, Outfall 001

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Biochemical Oxygen Demand (BOD5)	mg/L	Once in 2026	24-Hour Composite
Chemical Oxygen Demand (COD)	mg/L	Once in 2026	24-Hour Composite
Total Organic Carbon (TOC)	mg/L	Once in 2026	24-Hour Composite
Total Suspended Solids (TSS)	mg/L	Once in 2026	24-Hour Composite
Total Ammonia	mg/L as N	Once in 2026	24-Hour Composite
Asbestos	million fibers/liter (MFL)	Once in 2026	Grab

Table 6 – Flow Monitoring

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
Cooling Water Intake	MGD	Continuous	Metered/Recorded
Standby Service Water discharge to Outfall 001	MGD	Continuous or volume estimate	Metered/estimated
Radioactive wastewater treatment system effluent discharge to Outfall 001	Gallons	Total per event	Metered/estimated

Table 7 – Whole Effluent Toxicity Monitoring

Monitoring Type	Description
Acute Whole Effluent Toxicity Testing	As specified in condition S11
Chronic Whole Effluent Toxicity Testing	As specified in condition S12

S2.B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit must represent the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 Code of Federal Regulations (CFR) Part 136 [or as applicable in 40 CFR subchapter N (Parts 400-471) or 40 CFR Subchapter O (Parts 501-503)] unless otherwise specified in this permit. EFSEC may specify alternative methods only for parameters without limits and for those parameters without an EPA-approved test method in 40 CFR Part 136.

S2.C. Flow Measurement, Field Measurement, and Continuous Monitoring Devices

The Permittee must:

1. Select and use appropriate flow measurement, field measurement, and continuous monitoring devices and methods consistent with accepted scientific practices.
2. Install, calibrate, and maintain the devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacturer's recommendation, and approved Operation and Maintenance (O&M) Manual procedures for the device and the wastestream.
3. Calibrate continuous monitoring instruments weekly unless it can demonstrate a longer period is sufficient based on monitoring reports. The Permittee:
    a. May calibrate apparatus for continuous monitoring of Dissolved Oxygen by air calibration.
    b. Must calibrate continuous pH measurement instruments according to the manufacturer's requirements.

c. Must calibrate continuous Chlorine measurement instruments using a grab sample analyzed in the laboratory within 15 minutes of sampling.

4. Use field measurement devices as directed by the manufacturer and do not use reagents beyond their expiration dates.
5. Establish a calibration frequency for each device or instrument in the O&M Manual that conforms to the frequency recommended by the manufacturer.
6. Calibrate flow monitoring devices at a minimum frequency of at least one calibration per year.
7. Maintain calibration records for at least three years.

S2.D. Laboratory Accreditation

The Permittee must ensure that all monitoring data required by EFSEC for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 Washington Administrative Code (WAC), Accreditation of Environmental Laboratories. Flow, Temperature, Settleable Solids, Conductivity, pH, and internal process control parameters are exempt from the requirement. The Permittee must obtain accreditation for Conductivity and pH if it must receive accreditation or registration for other parameters.

S3. Reporting and Recording Requirements

The Permittee must monitor and report in accordance with the following conditions. Falsification of information submitted to EFSEC is a violation of the terms and conditions of this permit.

S3.A. Discharge Monitoring Reports

The first monitoring period begins on the effective date of the permit (unless otherwise specified). The Permittee must:

1. Summarize, report, and submit monitoring data obtained during each monitoring period on the electronic Discharge Monitoring Report (DMR) form provided by EFSEC within the Water Quality Permitting Portal[1] (WQWebPortal). Include data for each of the parameters tabulated in Special Conditions S2 and as required by the form. Report a value for each day sampling occurred (unless specifically exempted in the permit) and for the summary values (when applicable) included on the electronic form.
2. Submit DMRs no later than the dates specified below, unless otherwise specified in this permit.
3. Submit DMRs for parameters with the monitoring frequencies specified in S2 (monthly, quarterly, annual, etc.) at the reporting schedule identified below. The Permittee must:
   a. Submit monthly DMRs by the 15th day of the following month.
   b. Submit annual DMRs, unless otherwise specified in the permit, by January 15th for the previous calendar year. The annual sampling period is a calendar year, starting Insert Date.
   c. Submit permit renewal application monitoring data in WQWebDMR, as required in Special Condition S2, by Insert Date

[1] https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance

4. Enter the "No Discharge" reporting code for an entire DMR, for a specific monitoring point, or a specific parameter as appropriate, if the Permittee did not discharge wastewater or a specific pollutant during a given monitoring period.
5. Report single analytical values below detection as "less than the Detection Level (DL)" by entering the < followed by the numeric value of the detection level (e.g. < 2.0) on the DMR. If the method used did not meet the minimum DL and Quantitation Level (QL) identified in the permit report the actual QL and DL in the comments or in the location provided.
6. Report single analytical values between the DL and the QL by entering the estimated value, the code for estimated value/below quantitation limit (J) and any additional information in the comments.
7. Submit a copy of the laboratory report as an attachment using WQWebDMR.
8. Report the test method used for analysis in the comments if the laboratory used an alternative method not specified in the permit and as allowed in Appendix A or Special Condition S2.
9. Calculate average values and calculated total values (unless otherwise specified in the permit) using:
    a. The reported numeric value for all parameters measured between the detection value and the quantitation value for the sample analysis.
    b. One-half (1/2) the detection value (for values reported below detection) if the lab detected the parameter in another sample from the same monitoring point for the reporting period.
    c. Zero (for values reported below detection) if the lab did not detect the parameter in another sample for reporting period.
10. Report single-sample grouped parameters (for example: priority pollutants, PAHs, pulp and paper chlorophenolics, TTOs) on the WQWebDMR form and include: sample date, concentration detection, DL (as necessary), and laboratory QL (as necessary).

S3.B. Permit Submittals and Schedules

The Permittee must use the Water Quality Permitting Portal – Permit Submittals application (unless otherwise specified in the permit) to submit all other written permit required reports by the date specified in the permit.

When another permit condition requires submittal of a paper (hard-copy) report, the Permittee must ensure that it is postmarked or received by EFSEC no later than the dates specified by this permit. Send these paper reports to EFSEC at:

EFSEC
PO Box 43172
Olympia, WA 98504-3172

S3.C. 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 this permit, and records of all data used to complete the application for this 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 EFSEC.

S3.D. Recording of Results

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement;
2. The individual who performed the sampling or measurement;
3. The dates the analyses were performed;
4. The individual who performed the analyses;
5. The analytical techniques or methods used;
6. The results of all analyses.

S3.E. Additional monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by Special Condition S2 of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR unless otherwise specified by Special Condition S2.

S3.F. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.
2. If applicable. Immediately repeat sampling and analysis. Submit the results of any repeat sampling to EFSEC within 30 days of sampling.
   a. Immediate Reporting

      The Permittee must **immediately** report to EFSEC, Washington Department of Ecology (Ecology), and the Department of Health, Drinking Water Program (at the numbers listed below), for all:

      - Failures of disinfection system
      - Plant bypasses discharging to a water body used as a source of drinking water.

      EFSEC 360-664-1345

      Ecology Central Regional Office ERTS 509-575-2490

      Department of Health Drinking Water Program
      800-521-0323 (business hours)
      877-481-4901 (after hours)

   b. Twenty-Four (24) Hour Reporting

      The Permittee must report the following occurrences of noncompliance by telephone, to EFSEC at the telephone number listed above, within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

(i) Any noncompliance that may endanger health or the environment, unless previously reported under immediate reporting requirements.
(ii) Any unanticipated bypass that causes an exceedance of any effluent limit in the permit (See Part S4.B., Bypass Procedures).
(iii) Any upset that causes an exceedance of an effluent limit in the permit (See G15., Upset).
(iv) Any violation of a maximum daily or instantaneous maximum discharge limit for any of the pollutants in Special Condition S1.A. of this permit.
(v) Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limit in the permit. This requirement does not include industrial process wastewater overflows to impermeable surfaces which are collected and routed to the treatment works.

c. Report Within Five Days

The Permittee must also submit a written report within five days of the time that the Permittee becomes aware of any reportable event under subparts a or b, above. The report must contain:

(i) A description of the noncompliance and its cause.
(ii) The period of noncompliance, including exact dates and times.
(iii) The estimated time the Permittee expects the noncompliance to continue if not yet corrected.
(iv) Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
(v) If the noncompliance involves an overflow prior to the treatment works, an estimated of the quantity (in gallons) of untreated overflow.

d. Waiver of Written Reports

EFSEC may waive the written report required in subpart c, above, on a case-by-case basis upon request if the Permittee has submitted a timely oral report.

e. All Other Permit Violation Reporting

The Permittee must report all permit violations, which do not require immediate or within 24 hours reporting, when it submits monitoring reports for Special Condition S3.A. (Reporting). The reports must contain the information listed in subpart c, above. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

S3.G. Other Reporting

1. Spills of Oil or Hazardous Materials

In addition to the requirements in S3.F, the Permittee must report a spill of oil or hazardous materials in accordance with the requirements of Revised Code of Washington

(RCW) 90.56.280 and WAC 173-303-145. Visit the Ecology website How to Report a Spill[2] for further instructions.

2. Failure to Submit Relevant or Correct Facts

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to EFSEC, it must submit such facts or information promptly.

S3.H. Maintaining a Copy of this Permit

The Permittee must keep a copy of this permit at the facility and make it available upon request to EFSEC inspectors.

Operation and Maintenance

The Permittee must, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances), which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also include keeping a daily operation logbook (paper or electronic), adequate laboratory controls, and appropriate quality assurance procedures. This provision of the permit requires the Permittee to operate backup or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of this permit.

The Permittee must schedule any facility maintenance, which might require interrupting of wastewater treatment and degrade effluent quality, during non-critical water quality periods and carry this maintenance out according to the approved O&M Manual or as otherwise approved by EFSEC.

S3.I. Operation and Maintenance (O&M) Manual

1. O&M Manual Submittal and Requirements
   The Permittee must:
   a. Update the Columbia Generating Station Operations and Maintenance Plan (NPDES O&M Manual) and submit it to EFSEC by Insert Date.
   b. Update the Operation and Maintenance Manual for the Stormwater/Industrial Wastewater Evaporation System (Ponds O&M Manual) and submit it to EFSEC by Insert Date.
   c. Submit to EFSEC for review any substantial changes or updates to the O&M manuals.
   d. Keep the approved O&M manuals at the permitted facility.
   e. Follow the instructions and procedures of the O&M manuals.
2. NPDES O&M Manual Components
   In addition to the requirements listed in WAC 173-240-150, the NPDES O&M Manual must include:
   a. A review of system components which, if failed, could pollute surface water or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.

[2] https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill

b. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).
c. Wastewater sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
d. Procedures for inspection, maintenance, and reporting for the cooling water intake structures as described in Permit Condition S22.

3. Ponds O&M Manual Components
In addition to the requirements listed in WAC 173-240-150, the Ponds O&M Manual must include:
a. Procedures for leak detection.
b. Procedures to manage periods of low evaporation or ponds at full level.

S3.J. Bypass Procedures

A bypass is the intentional diversion of waste streams from any portion of a treatment facility. This permit prohibits all bypass except when the bypass is for essential maintenance, as authorized in Special Condition S4.B.1, or is approved by EFSEC as an anticipated bypass following the procedures in Special Condition S4.B.2.

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

This permit allows bypasses for essential maintenance of the treatment system when necessary to ensure efficient operation of the system. The Permittee may bypass the treatment system for essential maintenance only if doing so does not cause violations of effluent limits. The Permittee is not required to notify EFSEC when bypassing for essential maintenance. However, the Permittee must comply with the monitoring requirements specified in Special Condition S2.B.

2. Anticipated bypass for non-essential maintenance.

EFSEC may approve an anticipated bypass under the conditions listed below. This permit prohibits any anticipated bypass that is not approved through the following process.

a. If a bypass is for non-essential maintenance, the Permittee must notify EFSEC, if possible, at least 10 days before the planned date of bypass. The notice must contain:

- A description of the bypass and the reason the bypass is necessary.
- An analysis of all known alternatives which would eliminate, reduce, or mitigate the potential impacts from the proposed bypass.
- A cost-effectiveness analysis of alternatives.
- The minimum and maximum duration of bypass under each alternative.
- A recommendation as to the preferred alternative for conducting the bypass.
- The projected date of bypass initiation.
- A statement of compliance with State Environmental Policy Act (SEPA).

- A request for modification of Water Quality Standards as provided in WAC 173-201A-410, if an exceedance of any Water Quality Standard is anticipated.
- Details of the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

b. For probable construction bypasses, the Permittee must notify EFSEC of the need to bypass as early in the planning process as possible. The Permittee must consider the analysis required above during the project planning and design process. The project-specific engineering report as well as the plans and specifications must include details of probable construction bypasses to the extent practical. In cases where the Permittee determines the probable need to bypass early, the Permittee must continue to analyze conditions up to and including the construction period in an effort to minimize or eliminate the bypass.

c. EFSEC will determine if the Permittee has met the conditions of Special Condition S4.B.2.a and b, and consider the following prior to issuing a determination letter, an Administrative Order, or a permit modification as appropriate for an anticipated bypass:

- If the Permittee planned and scheduled the bypass to minimize adverse effects on the public and the environment.
- If the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. “Severe property damage” means substantial physical damage to the property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- If feasible alternatives to the bypass exist, such as:
  - The use of auxiliary treatment facilities
  - Retention of untreated wastes
  - Stopping production
  - Maintenance during normal periods of equipment downtime, but not if the Permittee should have installed adequate backup equipment in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.
  - Transport of untreated wastes to another treatment facility.

S4. Solid Waste

S4.A. Solid Waste Handling

The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

The Permittee must follow the procedures in EFSEC Resolution No. 299 or the most current resolution pertaining to the disposal of sediments from the cooling water system and double-lined impoundments (evaporation ponds).

S4.B. Leachate

The Permittee must not allow leachate from it solid waste material to enter state waters without providing all known, available, and reasonable methods of treatment (AKART), nor allow such leachate to cause violation of State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee must apply for a permit or permit modification as may be required for such discharges to state ground or surface water.

S4.C. Solid Waste Control Plan

The Permittee must submit all proposed revisions or modifications to the Solid Waste Control Plan to EFSEC for review and approval at least 30 days prior to implementation. The Permittee must comply with the approved Solid Waste Control Plan and any modifications once approved. The Permittee must submit an update of the Solid Waste Control Plan as needed.

S5. Application for Permit Renewal or Modification for Facility Changes

The Permittee must submit a complete application for renewal of this permit by Insert Date (at least one year prior to expiration date).

The Permittee must also submit a new application or addendum at least 180 days prior to commencement of discharges resulting from activities, listed below, which may result in permit violations. These activities include any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

S6. Non-Routine and Unanticipated Wastewater

S6.A. Notification Requirements

Beginning on the effective date of this permit, the Permittee is authorized to discharge non-routine wastewater or unanticipated wastewater, and therefore not listed on the permit application, on a case-by-case basis if approved by EFSEC. Prior to any such discharge, the Permittee must contact EFSEC, and at a minimum, provide the following information:

1. The proposed discharge location;
2. The nature of the activity that will generate the discharge;
3. Any alternatives to the discharge, such as reuse, storage, or recycling of the water;
4. The total volume of water it expects to discharge;
5. The results of the chemical analysis of the water;
6. The date of proposed discharge; and
7. The expected rate of discharge discharged, in gallons per minute.

S6.B. Chemical Analysis

The Permittee must analyze the water for constituents limited for the discharge and report them as required by subpart A.5 above. The analysis must also include any parameter deemed necessary by EFSEC. All discharges must comply with the effluent limits as established in Special Condition S1 of this permit, Water Quality Standards, and any other limits imposed by EFSEC.

S6.C. Flow Limitation

The Permittee must limit the discharge rate, as referenced in subpart A.7 above, so it will not cause erosion of ditches or structural damage to culverts and their entrances or exits.

S6.D. Approval Requirements

The discharge cannot proceed until EFSEC has reviewed the information provided and has authorized the discharge by letter to the Permittee or by an Administrative Order.

S7. Spill Control Plan

S7.A. Spill Control Plan Submittals and Requirements

The Permittee must:

1. Review the existing Spill Control Plan at least annually and update the Spill Plan as needed.
2. Send changes to the Plan to EFSEC.
3. Follow the Plan and any supplements throughout the term of the permit.

S7.B. Spill Control Plan Components

The Spill Control Plan must include the following:

1. A list of all bulk oil and petroleum products and other materials used and/or stored on-site, which when spilled, or otherwise released into the environment, designate as a Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070. Include other materials used and/or stored on-site which may become pollutants or cause pollution upon reaching State's waters.
2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
3. A description of the reporting system, the Permittee will use to alert responsible managers and legal authorities in the event of a spill.
4. A description of operator training to implement the Plan.

The Permittee may submit plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies, which meet the intent of this section. Approval of the Spill Control Plan with respect to this requirement does not constitute approval of the plans and manuals with respect to the underlying requirement.

S8. Stormwater Pollution Prevention Plan

S8.A. General Requirements

The Permittee must implement a Stormwater Pollution Prevention Plan (SWPPP).

1. The SWPPP must specify the Best Management Practices (BMPs) necessary to provide All Known, Available, and Reasonable methods of prevention, control, and Treatment (AKART) of stormwater pollution, ensure the discharge does not cause or contribute to a violation of the Water Quality Standards, and comply with applicable federal technology-based treatment requirements under 40 CFR 125.3.
2. BMPs in the SWPPP must be consistent with the Stormwater Management Manual for Eastern Washington (2019). Alternatively, the SWPPP shall include documentation that the BMPs selected are demonstrably equivalent to practices in the 2019 Stormwater Management Manual for Eastern Washington, including the proper selection, implementation, and maintenance of all applicable and appropriate best management practices for on-site pollution control.

3. The Permittee must modify the SWPPP 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.
4. The Permittee must sign and certify all revisions to the SWPPP in accordance with General Condition G1.

S8.B. Specific SWPPP Requirements

The SWPPP must contain:

1. A site map, showing all buildings, structures, and impermeable surfaces, location of BMPs, stormwater flows, and monitoring locations;
2. A detailed assessment of activities, equipment and materials that have the potential to contribute any pollutants to stormwater;
3. Specific individuals listed by name or position whose responsibilities include SWPPP development, implementation, maintenance and modification;
4. A description of the operational source control BMPs;
5. A description of the structural source control BMPs;
6. A description of treatment BMPs, if any;
7. A description of erosion and sediment control BMPs, if any.

S8.C. SWPPP Implementation

The Permittee must conduct two inspections per year: one during the wet season (October 1 – April 30) and the other during the dry season (May 1 – September 30). Personnel named in the SWPPP must conduct the wet season and dry season inspections.

1. Conduct the wet season inspection during a rainfall event. Verify that the description of potential pollutant sources required under this permit are accurate; the site map as required in the SWPPP has been updated or otherwise modified to reflect current conditions; and the controls to reduce pollutants in stormwater discharges associated with industrial activities identified in the SWPPP are being implemented and are adequate. The wet weather inspection must include observations of the presence of floating materials, suspended solids, oil and grease, discolorations, turbidity, odor, etc. in the stormwater discharges(s).
2. The dry season inspection must determine the presence of unpermitted non-stormwater discharges such as non-contact cooling water or process water to the stormwater system. If an unpermitted, non-stormwater discharge is discovered, the Permittee must immediately notify EFSEC.

S8.D. SWPPP Evaluation

The Permittee must:

1. Evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly implemented in accordance with the terms of the permit or whether additional controls are needed.
2. Maintain a record summarizing the results of inspections and include a certification, in accordance with General Condition G1, that the facility is in compliance with the plan and in compliance with the permit.
3. Identify and correct any incidents of noncompliance with the SWPPP.

S8.E. SWPPP Update

The Permittee must review and update the CGS SWPPP (2015) and submit it to EFSEC by xxxx (1 year prior to expiration date).

S9. Outfall Evaluation

The Permittee must inspect the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, the Permittee must include such verification in the report. By Insert Date, the Permittee must submit the inspection report to EFSEC.

The inspector must, at a minimum:

1. Assess the physical condition of the outfall pipe and associated couplings.
2. Determine the extent of sediment accumulation in the vicinity of the outfall.
3. Confirm physical location (latitude/longitude) and depth (at MLLW) of the diffuser section of the outfall.
4. Assess physical condition of the submarine line.
5. Assess physical condition of anchors used to secure the submarine line.

S10. Acute Toxicity

S10.A. Testing When There is No Permit Limit for Acute Toxicity

The Permittee must:

1. Conduct Acute Toxicity Testing on final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal.
2. Conduct Acute Toxicity Testing on a series of at least five concentrations of effluent, including 100 percent effluent and a control.
3. Use each of the following species and protocols for each Acute Toxicity test:

Table 8 - Acute Toxicity Tests

Acute Toxicity Tests	Species	Method
Fathead Minnow 96-Hour Static-Renewal Test	Pimephales Promelas	EPA-821-R-02-012
Daphnid 48-Hour Static Test	Ceriodaphnia Dubia, Daphnia Pulex, OR Daphnia Magna	EPA-821-R-02-012

4. Submit the results to EFSEC by Insert Date (with the permit renewal application).

S10.B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication 95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing, while the continuous halogenation/dehalogenation process is operating. The Permittee

must cool the samples to 0 – 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.

3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the Ecology Publication WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. If EFSEC determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct Whole Effluent Toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in the order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC. The ACEC equals 11 percent effluent.
8. All Whole Effluent Toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing must comply with the Acute Statistical Power Standard of 29 percent as defined in WAC 173-205-020. If the test does not meet the Power Standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

S11. Chronic Toxicity

S11.A. Testing When There is No Permit Limit for Chronic Toxicity

The Permittee must:

1. Conduct Chronic Toxicity testing on final effluent once in the last winter and once in the last summer prior to submission of the application for permit renewal.
2. Conduct Chronic Toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the ACEC. The ACEC equals 11 percent effluent. The series of dilutions should also contain the CCEC of 1 percent effluent.
3. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.
4. Submit the results to EFSEC by Insert Date (with the permit renewal application).
5. Perform Chronic Toxicity Tests with all of the following species and the most recent version of the following protocols:

Table 9 - Chronic Toxicity Tests

Freshwater Chronic Test	Species	Method
Fathead Minnow Survival and Growth	Pimephales Promelas	EPA-821-R-02-013
Water Flea Survival and Reproduction	Ceriodaphnia Dubia	EPA-821-R-02-013

S11.B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Ecology Publication 95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Reports must contain toxicity data, bench sheets, and reference toxicant results for test methods. In addition, the Permittee must submit toxicity test data in electronic format (CETIS export file preferred) for entry into Ecology's database.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing, while the continuous halogenation/dehalogenation process is operating. The Permittee must cool the samples to 0 – 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Ecology Publication WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in Subsection C and the Ecology Publication WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. If EFSEC determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in Section A or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct Whole Effluent Toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in the order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. The CCEC equals 1 percent effluent. The ACEC equals 11 percent effluent.
8. All Whole Effluent Toxicity tests that involve hypothesis testing must comply with the Chronic Statistical Power Standard of 39 percent as defined in WAC 173-205-020. If the test does not meet the Power Standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

S12. Cooling Water Intake Structure (CWIS)

Pursuant to Section 316(b) of the Clean Water Act, the Permittee must comply with the following requirements to minimize adverse impact by the facility's cooling water intake structure (CWIS).

S12.A. Closed-cycle Recirculating System

The Permittee must continue to operate a closed-cycle recirculating system as defined at 40 CFR 125.92(c).

S12.B. Operation and Maintenance

The Permittee must:

1. At all times, properly operate and maintain the CWIS including any existing technologies currently used to minimize impingement and entrainment.
2. Report any significant impingement or entrainment events to EFSEC within 24 hours consistent with the requirements in Permit Condition S3.F.b.
3. Notify EFSEC 60 days prior to any changes which change the design through-screen velocity or location of the CWIS.
4. Perform visual impingement monitoring of the CWIS at a minimum of once per year when the intake structure is operational and the inspection can be conducted safely. Include photographic verification if conditions allow. Document inspection dates, findings, and any maintenance performed. Records of inspections must be made available to EFSEC upon request.
5. Include procedures for inspection, maintenance, and reporting for the CWIS in the Operation and Maintenance Manual required by Permit Condition S4.A.

S12.C. Annual Certification Statement and Report

The Permittee must submit an annual signed certification statement which includes the following:

1. If the information contained in the previous year's annual certification is still pertinent (or, if this is the first submission of the annual signed certification statement, if the information contained in the permit application submitted to EFSEC is still pertinent), the Permittee may simply state as such in the annual certification.
2. If the Permittee has substantially modified operation of any unit at the facility that impacts cooling water withdrawals or operation of your cooling water intake structures, they must provide a summary of those changes in the report. In addition, they must submit revisions to the information required in the next permit application.
3. The annual report must include a summary of inspection dates, findings, and maintenance.
4. The annual certification statement must be signed by the responsible corporate officer.
5. Submit the certification statement and report to EFSEC by January 15, 2024 and annually thereafter.

S12.D. Endangered Species Act

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

1. All applicants submitted to EFSEC must be signed and certified.
   a. In the case of corporations, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      - A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or
      - The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing the other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

   b. In the case of a partnership, by a general partner.
   c. In the case of sole proprietorship, by the proprietor.
   d. In the case of municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

      Applications for permit for domestic wastewater facilities that are either owned or operated by, or under contract to, a public entity shall be submitted by the public entity.

2. All reports required by this permit and other information requested by EFSEC must 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:
   a. The authorization is made in writing by a person described above and submitted to EFSEC.
   b. 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. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph G1.2., above, is no longer accurate because a different individual or position has responsibility for overall operation of the facility, a new authorization satisfying the requirements of paragraph G1.2., above, must be submitted to EFSEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section must make the following certification:

"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."

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of EFSEC, upon the presentation of credentials and such other documents as may be required by law:

1. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
2. To have access to and copy, at reasonable times and a reasonable cost, any records required to be kept under the terms and conditions of this permit.
3. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
4. To sample or monitor, at reasonable times, any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon EFSEC's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR Part 122.62, 40 CFR Part 122.64, or WAC 173-220-150 according to the procedures of 40 CFR Part 124.5.

1. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
   a. Violation of any permit term or condition.
   b. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
   c. A material change in quantity or type of waste disposal.
   d. Determination that the permitted activity endangers human health or the environment, or contributes to Water Quality Standards violations and can only be regulated to acceptable levels by modification or termination.
   e. A change in any condition requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit.
   f. Nonpayment of fees assessed pursuant to RCW 90.48.465.
   g. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

2. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
   a. A material change in the condition of waters of the State.
   b. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
   c. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
   d. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
   e. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.
   f. EFSEC has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statuary deadlines.
   g. Incorporation of an approved local pretreatment program into a municipality's permit.
3. The following are causes for modification or alternatively revocation and reissuance:
   a. The permitted facility being determined to be a new source pursuant to 40 CFR Part 122.29(b).
   b. A significant change in the nature or an increase in quantity of pollutants discharged.
   c. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required Engineering Plans and Reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR Part 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.

G4. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, but no later than 180 days prior to the proposed changes, give notice to EFSEC of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:

1. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).
2. A significant change in the nature or an increase in quantity of pollutants discharged.
3. A significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of new application or supplement to the existing application, along with required Engineering Plans and Reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, a new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an Engineering Report and detailed Plans and Specifications must be submitted to EFSEC for approval in accordance with

Chapter 173-240 WAC. Engineering Reports, Plans, and Specifications must be submitted at least 180 days prior to the planned start of construction unless a shorter time is approved by EFSEC. Facilities must be constructed and operated in accordance with the approval plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit excuses the Permittee from compliance with any applicable federal, state, or local statutes ordinances, or regulations.

G7. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to EFSEC.

1. Transfer by Modification

   Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR Part 122.62(b)(2), or a minor modification made under 40 CFR Part 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

2. Automatic Transfers

   This permit may be automatically transferred to a new Permittee if:

   a. The Permittee notifies EFSEC at least 30 days in advance of the proposed transfer date.
   b. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.
   c. EFSEC does not notify the existing Permittee and the proposed new Permittee or its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR Part 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G8. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must not be re-suspended or reintroduced to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to EFSEC within a reasonable time, all information which EFSEC may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to EFSEC, upon request, copies of records required to be kept by this permit.

G11. OTHER REQUIREMENTS OF 40 CFR

The other requirements of 40 CFR Part 122.41 and 40 CFR Part 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

EFSEC may establish specific monitoring requirements in addition to those contained in this permit by Administrative Order or permit modification.

G13. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by EFSEC.

G14. PENALTIES FOR VIOLATION OF PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof, shall be punished by a fine up to $10,000 and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit may incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to $10,000 for each such violation. Each and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

G15. UPSET

Definition – "Upset" means an exception incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limits if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the Permittee can identify the cause(s) of the upset.
2. The permitted facility was being properly operated at the time of the upset.
3. The Permittee submitted notice of the upset as required in Special Condition S3.F.
4. The Permittee complied with any remedial measures required under Special Condition S3.F. of this permit.

If any enforcement action the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. PROPERTY RIGHTS

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

G17. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is ground for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal.

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or by both.

G20. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGES

The Permittee belonging to the categories of existing manufacturing, commercial, Mining, or silviculture must notify EFSEC as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"
    a. One hundred micrograms per liter (100 µg/L)
    b. Two hundred micrograms per liter (200 µg/L) for Acrolein and Acrylonitrile; 500 µg/L for 2,4-Dinitrophenol and 2-Methyl-4,6-Dinitrophenol; and 1 mg/L for Antimony.
    c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Part 122.21(g)(7).
    d. The level established by the Director in accordance with 40 CFR Part 122.44 (f).
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"
    a. Five hundred (500) µg/L
    b. One (1) mg/L for Antimony
    c. Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Part 122.21(g)(7).
    d. The level established by the Director in accordance with 40 CFR Part 122.44(f).

G21. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

APPENDIX A – List Of Pollutants, Analytical Methods, Detection Levels And Quantitation Levels

The Permittee must use the specified analytical methods, detection levels (DLs) [1] and quantitation levels (QLs) [2] 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 level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits).

The lists below include conventional pollutants (as defined in CWA section 502(6) and 40 CFR Part 122), toxic or priority pollutants as defined in CWA section 307(a)(1) and listed in 40 CFR Part 122 Appendix D, 40 CFR Part 401.15 and 40 CFR Part 423 Appendix A), and nonconventionals. 40 CFR Part 122 Appendix D (Table V) also identifies toxic pollutants and hazardous substances which are required to be reported by dischargers if expected to be present. This permit appendix A list does not include those parameters.

Appendix A Table 1 – Conventional Pollutants

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B [3]		2 mg/L
Fecal Coliform		SM 9221E, 9221F SM 9222D	N/A	Specified in method sample aliquot dependent
Oil and Grease (HEM) (Hexane Extractable Material)		1664 A or B	1,400	5,000

Appendix A Table 1 – Conventional Pollutants continued

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
pH		SM4500-H+ B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

Footnotes for Appendix A Tables 1 - 8:

[1] Detection level (DL) – or method detection limit means the minimum concentration of an analyte (substance) that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results as determined by the procedure given in 40 CFR part 136, Appendix B.

[2] Quantitation Level (QL) – also known as Minimum Level (ML) – The term ‘‘minimum level’’ refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (DL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the DL in a method, or the DL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: ‘‘quantitation limit,’’ ‘‘reporting limit,’’ and ‘‘minimum level’’.

[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.

[4] Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx – Analytical Methods for Petroleum Hydrocarbons https://apps.ecology.wa.gov/publications/documents/97602.pdf

[5] Northwest Total Petroleum Hydrocarbons Gasoline Extended Range OR NWTPH Gx – Analytical Methods for Petroleum Hydrocarbons https://apps.ecology.wa.gov/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] Bis(2-Chloro-1-Methylethyl) Ether – This compound was previously listed as Bis(2-Chloroisopropyl) Ether (39638-32-9)

[9] 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 14/42 ng/L.

[10] PCB 1016 & PCB 1242 – You may report these two PCB compounds as one parameter called PCB 1016/1242.

Appendix A Table 2 - Nonconventional Pollutants

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Alkalinity, Total		SM2320-B		5 mg/L as $CaCO_3$
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH3-B and C/D/E/G/H		20
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
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L
E.coli		SM 9221B, 9221F, 9223B	N/A	Specified in method; sample aliquot dependent
Enterococci		EPA 1600 SM 9230B, 9230C, 9230D,	N/A	Specified in method; sample aliquot dependent
Flow		Calibrated device		
Fluoride	16984-48-8	SM4500-F E	25	100
Hardness, Total		SM2340B		200 as $CaCO_3$
Iron, Total	7439-89-6	200.7	12.5	50
Magnesium, Total	7439-95-4	200.7	10	50
Manganese, Total	7439-96-5	200.8	0.1	0.5

Appendix A Table 2 – Nonconventional Pollutants continued

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Molybdenum, Total	7439-98-7	200.8	0.1	0.5
Nitrate + Nitrite Nitrogen (as N)		SM4500-NO_3- E/F/H		100
Nitrogen, Total Kjeldahl (as N)		SM4500-N_{org}B/C and SM4500NH_3-B/C/D/EF/G/H		300
NWTPH Dx [4]		Ecology NWTPH Dx	250	250
NWTPH Gx [5]		Ecology NWTPH Gx	250	250
Phosphorus, Total (as P)		SM 4500 PB followed by SM4500-PE/PF	3	10
Salinity		SM2520-B		3 practical salinity units or scale (PSU or PSS)
Settleable Solids		SM2540 -F		Sample and limit dependent
Soluble Reactive Phosphorus (as P)		SM4500-P E/F/G	3	10
Sulfate (as mg/L SO_4)		SM4110-B		0.2 mg/L
Sulfide (as mg/L S)		SM4500-S2F/D/G		0.2 mg/L
Sulfite (as mg/L SO_3)		SM4500-SO3B		2 mg/L
Temperature		Analog recorder or micro-recording devices (thermistors)		0.2°C
Tin, Total	7440-31-5	200.8	0.3	1.5
Titanium, Total	7440-32-6	200.8	0.5	2.5
Total Coliform		SM 9221B SM 9222B	N/A	Specified in method; sample aliquot dependent

Appendix A Table 2 – Nonconventional Pollutants continued

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Total Organic Carbon		SM5310-B/C/D		1 mg/L
Total Dissolved solids		SM2540 C		20 mg/L

Appendix A Table 3 - Priority Pollutants: Metals, Chromium (hex), Cyanide & Total Phenols

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Antimony, Total	114	7440-36-0	200.8	0.3	1.0
Arsenic, Total	115	7440-38-2	200.8	0.1	0.5
Beryllium, Total	117	7440-41-7	200.8	0.1	0.5
Cadmium, Total	118	7440-43-9	200.8	0.05	0.25
Chromium (hex) dissolved	119	18540-29-9	SM3500-Cr C	0.3	1.2
Chromium, Total	119	7440-47-3	200.8	0.2	1.0
Copper, Total	120	7440-50-8	200.8	0.4	2.0
Lead, Total	122	7439-92-1	200.8	0.1	0.5
Mercury, Total	123	7439-97-6	1631E	0.0002	0.0005
Nickel, Total	124	7440-02-0	200.8	0.1	0.5
Selenium, Total	125	7782-49-2	200.8	1.0	1.0
Silver, Total	126	7440-22-4	200.8	0.04	0.2
Thallium, Total	127	7440-28-0	200.8	0.09	0.36
Zinc, Total	128	7440-66-6	200.8	0.5	2.5
Cyanide, Total	121	57-12-5	335.4	5	10
Cyanide, Weak Acid Dissociable	121		SM4500-CN I	5	10
Cyanide, Free Amenable to Chlorination (Available Cyanide)	121		SM4500-CN G	5	10
Phenols, Total	65		EPA 420.1		50

Appendix A Table 4 - Priority Pollutants: Acid Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
2-Chlorophenol	24	95-57-8	625.1	3.3	9.9
2,4-Dichlorophenol	31	120-83-2	625.1	2.7	8.1
2,4-Dimethylphenol	34	105-67-9	625.1	2.7	8.1
4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	60	534-52-1	625.1/1625B	24	72
2,4 dinitrophenol	59	51-28-5	625.1	42	126
2-Nitrophenol	57	88-75-5	625.1	3.6	10.8
4-Nitrophenol	58	100-02-7	625.1	2.4	7.2
Parachlorometa cresol (4-chloro-3-methylphenol)	22	59-50-7	625.1	3.0	9.0
Pentachlorophenol	64	87-86-5	625.1	3.6	10.8
Phenol	65	108-95-2	625.1	1.5	4.5
2,4,6-Trichlorophenol	21	88-06-2	625.1	2.7	8.1

Appendix A Table 5 - Priority Pollutants: Volatile Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Acrolein	2	107-02-8	624.1	5	10
Acrylonitrile	3	107-13-1	624.1	1.0	2.0
Benzene	4	71-43-2	624.1	4.4	13.2
Bromoform	47	75-25-2	624.1	4.7	14.1
Carbon tetrachloride	6	56-23-5	624.1/601 or SM6230B	2.8	8.4
Chlorobenzene	7	108-90-7	624.1	6.0	18.0
Chloroethane	16	75-00-3	624/601	1.0	2.0
2-Chloroethylvinyl Ether	19	110-75-8	624.1	1.0	2.0
Chloroform	23	67-66-3	624.1 or SM6210B	1.6	4.8

Appendix A Table 5 – Priority Pollutants: Volatile Compounds continued

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Dibromochloromethane (chlordibromomethane)	51	124-48-1	624.1	3.1	9.3
1,2-Dichlorobenzene	25	95-50-1	624.1	1.9	7.6
1,3-Dichlorobenzene	26	541-73-1	624.1	1.9	7.6
1,4-Dichlorobenzene	27	106-46-7	624.1	4.4	17.6
Dichlorobromomethane	48	75-27-4	624.1	2.2	6.6
1,1-Dichloroethane	13	75-34-3	624.1	4.7	14.1
1,2-Dichloroethane	10	107-06-2	624.1	2.8	8.4
1,1-Dichloroethylene	29	75-35-4	624.1	2.8	8.4
1,2-Dichloropropane	32	78-87-5	624.1	6.0	18.0
1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene)[6]	33	542-75-6	624.1	5.0	15.0
Ethylbenzene	38	100-41-4	624.1	7.2	21.6
Methyl bromide (Bromomethane)	46	74-83-9	624/601	5.0	10.0
Methyl chloride (Chloromethane)	45	74-87-3	624.1	1.0	2.0
Methylene chloride	44	75-09-2	624.1	2.8	8.4
1,1,2,2-Tetrachloroethane	15	79-34-5	624.1	6.9	20.7
Tetrachloroethylene	85	127-18-4	624.1	4.1	12.3
Toluene	86	108-88-3	624.1	6.0	18.0
1,2-Trans-Dichloroethylene (Ethylene dichloride)	30	156-60-5	624.1	1.6	4.8
1,1,1-Trichloroethane	11	71-55-6	624.1	3.8	11.4
1,1,2-Trichloroethane	14	79-00-5	624.1	5.0	15.0
Trichloroethylene	87	79-01-6	624.1	1.9	5.7
Vinyl chloride	88	75-01-4	624/SM6200B	1.0	2.0

Appendix A Table 6 - Priority Pollutants: Base/Neutral Compounds

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Acenaphthene	1	83-32-9	625.1	1.9	5.7
Acenaphthylene	77	208-96-8	625.1	3.5	10.5
Anthracene	78	120-12-7	625.1	1.9	5.7
Benzidine	5	92-87-5	625.1	44	132
Benzyl butyl phthalate	67	85-68-7	625.1	2.5	7.5
Benzo(a)anthracene	72	56-55-3	625.1	7.8	23.4
Benzo(b)fluoranthene (3,4-benzofluoranthene) [7]	74	205-99-2	610/625.1	4.8	14.4
Benzo(k)fluoranthene (11,12-benzofluoranthene) [7]	75	207-08-9	610/625.1	2.5	7.5
Benzo(a)pyrene	73	50-32-8	610/625.1	2.5	7.5
Benzo(ghi)Perylene	79	191-24-2	610/625.1	4.1	12.3
Bis(2-chloroethoxy)methane	43	111-91-1	625.1	5.3	15.9
Bis(2-chloroethyl)ether	18	111-44-4	611/625.1	5.7	17.1
Bis(2-chloro-1-methylethyl)Ether (Bis(2-chloroisopropyl)ether) [8]	42	108-60-1	625.1	5.7	17.1
Bis(2-ethylhexyl)phthalate	66	117-81-7	625.1	2.5	7.5
4-Bromophenyl phenyl ether	41	101-55-3	625.1	1.9	5.7
2-Chloronaphthalene	20	91-58-7	625.1	1.9	5.7
4-Chlorophenyl phenyl ether	40	7005-72-3	625.1	4.2	12.6
Chrysene	76	218-01-9	610/625.1	2.5	7.5
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	82	53-70-3	625.1	2.5	7.5
3,3-Dichlorobenzidine	28	91-94-1	605/625.1	16.5	49.5
Diethyl phthalate	70	84-66-2	625.1	1.9	5.7
Dimethyl phthalate	71	131-11-3	625.1	1.6	4.8
Di-n-butyl phthalate	68	84-74-2	625.1	2.5	7.5

Appendix A Table 6 - Priority Pollutants: Base/Neutral Compounds continued

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
2,4-dinitrotoluene	35	121-14-2	609/625.1	5.7	17.1
2,6-dinitrotoluene	36	606-20-2	609/625.1	1.9	5.7
Di-n-octyl phthalate	69	117-84-0	625.1	2.5	7.5
1,2-Diphenylhydrazine (as Azobenzene)	37	122-66-7	1625B/625.1	5.0	20
Fluoranthene	39	206-44-0	625.1	2.2	6.6
Fluorene	80	86-73-7	625.1	1.9	5.7
Hexachlorobenzene	9	118-74-1	612/625.1	1.9	5.7
Hexachlorobutadiene	52	87-68-3	625.1	0.9	2.7
Hexachlorocyclopentadiene	53	77-47-4	1625B/625.1	2.0	4.0
Hexachloroethane	12	67-72-1	625.1	1.6	4.8
Indeno(1,2,3-cd)Pyrene	83	193-39-5	610/625.1	3.7	11.1
Isophorone	54	78-59-1	625.1	2.2	6.6
Naphthalene	55	91-20-3	625.1	1.6	4.8
Nitrobenzene	56	98-95-3	625.1	1.9	5.7
N-Nitrosodimethylamine	61	62-75-9	607/625.1	2.0	4.0
N-Nitrosodi-n-propylamine	63	621-64-7	607/625.1	0.5	1.0
N-Nitrosodiphenylamine	62	86-30-6	625.1	1.0	2.0
Phenanthrene	81	85-01-8	625.1	5.4	16.2
Pyrene	84	129-00-0	625.1	1.9	5.7
1,2,4-Trichlorobenzene	8	120-82-1	625.1	1.9	5.7

Appendix A Table 7 - Dioxin

Priority Pollutant	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (2,3,7,8 TCDD)	129	1746-01-6	1613B	1.3 pg/L	5 pg/L

Appendix A Table 8 - Pesticides and PCBs

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
Aldrin	89	309-00-2	608.3	4.0 ng/L	12 ng/L
alpha-BHC	102	319-84-6	608.3	3.0 ng/L	9.0 ng/L
beta-BHC	103	319-85-7	608.3	6.0 ng/L	18 ng/L
gamma-BHC (Lindane)	104	58-89-9	608.3	4.0 ng/L	12 ng/L
delta-BHC	105	319-86-8	608.3	9.0 ng/L	27 ng/L
Chlordane [9]	91	57-74-9	608.3	14 ng/L	42 ng/L
4,4'-DDT	92	50-29-3	608.3	12 ng/L	36 ng/L
4,4'-DDE	93	72-55-9	608.3	4.0 ng/L	12 ng/L
4,4' DDD	94	72-54-8	608.3	11ng/L	33 ng/L
Dieldrin	90	60-57-1	608.3	2.0 ng/L	6.0 ng/L
alpha-Endosulfan	95	959-98-8	608.3	14 ng/L	42 ng/L
beta-Endosulfan	96	33213-65-9	608.3	4.0 ng/L	12 ng/L
Endosulfan Sulfate	97	1031-07-8	608.3	66 ng/L	198 ng/L
Endrin	98	72-20-8	608.3	6.0 ng/L	18 ng/L
Endrin Aldehyde	99	7421-93-4	608.3	23 ng/L	70 ng/L
Heptachlor	100	76-44-8	608.3	3.0 ng/L	9.0 ng/L
Heptachlor Epoxide	101	1024-57-3	608.3	83 ng/L	249 ng/L
PCB-1242 [10]	106	53469-21-9	608.3	0.065	0.195
PCB-1254	107	11097-69-1	608.3	0.065	0.195

Appendix A Table 8 - Pesticides and PCBs continued

Priority Pollutants	PP #	CAS Number (if available)	Recommended Analytical Protocol	Detection Level (DL) [1] µg/L Unless specified	Quantitation Level (QL) [2] µg/L Unless specified
PCB-1221	108	11104-28-2	608.3	0.065	0.195
PCB-1232	109	11141-16-5	608.3	0.065	0.195
PCB-1248	110	12672-29-6	608.3	0.065	0.195
PCB-1260	111	11096-82-5	608.3	0.065	0.195
PCB-1016 [10]	112	12674-11-2	608.3	0.065	0.195
Toxaphene	113	8001-35-2	608.3	240 ng/L	720 ng/L

APPENDIX B - REFERENCES

National Pollutant Discharge Elimination System
Waste Discharge Permit WA0025151, Issued Insert Date
List of Referenced Citations and Hyperlinks

Federal Code of Regulations (CFR):

Title 10 CFR Part 20.
- Title 10 last amended 4/14/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-10/chapter-I/part-20

Title 10 CFR Part 50
- Title 10 last amended 4/14/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-10/chapter-I/part-50

Title 40 CFR Part 112
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-112

Title 40 CFR Part 122.21(g)(7)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-B/section-122.21

Title 40 CFR Part 122.29(b)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-B/section-122.29

Title 40 CFR Part 122.41
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.41

Title 40 CFR Part 122.42
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.42

Title 40 CFR Part 122.44 (f)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.44

Title 40 CFR Part 122.62
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-D/section-122.62

Title 40 CFR Part 122.63(d)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-D/section-122.63

Title 40 CFR Part 122.64
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-D/section-122.64

Title 40 CFR Part 124.5
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-124/subpart-A/section-124.5

Title 40 CFR Part 125.3
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-125/subpart-A/section-125.3

Title 40 CFR Part 125.92(c)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-125/subpart-J/section-125.92

Title 40 CFR Part 136
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136?toc=1

Title 40 CFR Part 401.15
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N/part-401/section-401.15

Title 40 CFR Part 423 Appendix A
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N/part-423/appendix-Appendix%20A%20to%20Part%20423

Title 40 CFR Subchapter N (Parts 400-471)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N

Title 40 CFR Subchapter O (Parts 501-503)
- Title 40 last amended 4/13/23.
- Link accessed 4/20/23: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-O

Revised Code of Washington (RCW):

RCW 80.50
- Link accessed 4/13/23: https://app.leg.wa.gov/rcw/default.aspx?cite=80.50

RCW 90.48.465
- Link accessed 4/20/23: https://app.leg.wa.gov/RCW/default.aspx?cite=90.48.465

RCW 90.48.090
- Link accessed 4/20/23: https://app.leg.wa.gov/RCW/default.aspx?cite=90.48.090

RCW 90.56.280
- Link accessed 4/20/23: https://app.leg.wa.gov/RCW/default.aspx?cite=90.56.280

Washington Administrative Code (WAC):

WAC 173-50
- Link accessed 4/13/23: https://apps.leg.wa.gov/wac/default.aspx?cite=173-50

WAC 173-200
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-200

WAC 173-201A
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-201A

WAC 173-201A-410
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-201A-410

WAC 173-205-020
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-205

WAC 173-220-150
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-220-150

WAC 173-240
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-240

WAC 173-240-150
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-240-150

WAC 173-303
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-303

WAC 173-303-070
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-070

WAC 173-303-145
- Link accessed 4/20/23: https://app.leg.wa.gov/WAC/default.aspx?cite=173-303-145

Websites:
- Water Quality Permitting Portal
- How to Report a Spill
- WQWebDMR, https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance

Manuals and Guidelines:
- Ecology Publication 95-80 (Revised June 2016), Whole Effluent Toxicity Testing Guidance and Test Review Criteria Whole Effluent Toxicity Testing Guidance and test Review Criteria (wa.gov)
- EPA, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (October 2002) Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms; 4th ed. (epa.gov)

- Ecology Publication 18-10-044, 2019 Stormwater Management Manual for Eastern Washington (SWMMEW), Stormwater Management Manual for Eastern Washington (2019)

Analytical Methods:

- Northwest Total Petroleum Hydrocarbons Diesel Extended Range OR NWTPH Dx – Analytical Methods for Petroleum Hydrocarbons https://apps.ecology.wa.gov/publications/documents/97602.pdf

FACT SHEET FOR NPDES PERMIT WA0025151

Energy Northwest Columbia Generating Station

Date of Public Notice: xx/xx/xxxx

Permit Effective Date: xx/xx/xxxx

Purpose of this fact sheet

This fact sheet explains and documents the decisions the Energy Facility Site Evaluation Council (EFSEC) made in drafting the proposed National Pollutant Discharge Elimination System (NPDES) permit for Columbia Generating Station, operated by Energy Northwest.

This fact sheet complies with Section 463-76-034 of the Washington Administrative Code (WAC), which requires EFSEC to prepare a draft permit and accompanying fact sheet for public evaluation before issuing an NPDES permit.

EFSEC makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before issuing the final permit. Copies of the fact sheet and draft permit for Columbia Generating Station, NPDES permit WA0025151, are available for public review and comment from insert month day, year until month day, year. For more details on preparing and filing comments about these documents, please see Appendix A - Public Involvement Information.

Energy Northwest reviewed the draft permit and fact sheet for factual accuracy. EFSEC corrected any errors or omissions regarding the facility's location, history, discharges, or receiving water prior to publishing this draft fact sheet for public notice.

After the public comment period closes, EFSEC will summarize substantive comments and provide responses to them. EFSEC will include the summary and responses to comments in this fact sheet as Appendix E - Response to Comments and publish it when issuing the final NPDES permit. EFSEC generally will not revise the rest of the fact sheet. The full document will become part of the legal history contained in the facility's permit file.

Summary

Energy Northwest operates a nuclear-fueled steam electric power generation plant that discharges to the Columbia River. EFSEC issued the current permit on September 30, 2014 and modified the permit on February 8, 2016 and again on March 19, 2019. The current permit reflects changes to the facility's dehalogenation process made in 2019.

Effluent limits for pH, flow, chromium, zinc, total residual halogens, PCBs, and priority pollutants contained in chemicals added for cooling system maintenance are unchanged from the permit issued in 2014.

Summary of changes in the proposed permit:

- Added limit and DMR reporting for heat load based on the Total Maximum Daily Load (TMDL) for temperature in the Columbia and Lower Snake Rivers.
- Removed the limit for acute whole effluent toxicity, based on the facility meeting the performance standard throughout the previous permit term. Acute WET testing requirements are reduced from quarterly to twice during the permit term.
- Removed permit conditions and monitoring related to the Outfall 002 discharge to ground, which has been replaced by a non-discharging evaporative lagoon.
- Metals monitoring - chromium and zinc increased to 2/month for better monitoring of effluent limit compliance. Copper removed from monthly monitoring and included in annual priority pollutant monitoring.
- PCBs included in annual priority pollutant monitoring.
- Groundwater studies required by the previous permit were completed and accepted by EFSEC. The proposed permit does not authorize any discharges to groundwater other than stormwater covered under the UIC Program.
- Cooling water intake structures - the entrainment characterization study and the operation and maintenance manual required by the previous permit were completed and accepted by EFSEC. The proposed permit includes updated requirements for compliance with Section 316(b) of the Clean Water Act.

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I. Introduction

The Federal Clean Water Act (FCWA, 1972, and later amendments in 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One mechanism for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), administered by the federal Environmental Protection Agency (EPA). The EPA authorized the state of Washington to manage the NPDES permit program in our state. Our state legislature accepted the delegation and assigned the power and duty for conducting NPDES permitting and enforcement to the Department of Ecology (Ecology) and EFSEC. The Legislature defined Ecology's and EFSEC's authority and obligations for the wastewater discharge permit program in 90.48 RCW[1] (Revised Code of Washington).

The following regulations apply to industrial NPDES permits:

- Procedures EFSEC follows for issuing NPDES permits (chapter 173-220 WAC[2])
- Water quality criteria for surface waters (chapter 173-201A WAC[3])
- Water quality criteria for ground waters (chapter 173-200 WAC[4])
- Whole effluent toxicity testing and limits (chapter 173-205 WAC[5])
- Sediment management standards (chapter 173-204 WAC[6])
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC[7])

These rules require any industrial facility owner/operator to obtain an NPDES permit before discharging wastewater to state waters. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Under the NPDES permit program and in response to a complete and accepted permit application, EFSEC must prepare a draft permit and accompanying fact sheet, and make them available for public review before final issuance. EFSEC must also publish an announcement (public notice) telling people where they can read the draft permit, and where to send their comments, during a period of thirty days (WAC 173-220-050[8]). (See *Appendix A-Public Involvement Information* for more detail about the public notice and comment procedures). After the public comment period ends, EFSEC may make changes to the draft NPDES permit in response to comment(s). EFSEC will summarize the responses to comments and any changes to the permit in Appendix E.

[1] https://app.leg.wa.gov/RCW/default.aspx?cite=90.48
[2] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-220
[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A
[4] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200
[5] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-205
[6] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-204
[7] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-240
[8] https://app.leg.wa.gov/WAC/default.aspx?cite=173-220-050

II. Background Information

Table 1 - Facility Information

Applicant:	**Energy Northwest**
Facility Name and Address	Columbia Generating Station P.O. Box 968 (Mail Drop PE20) Richland, WA 99352
Contact at Facility	Marshall Schmitt Title: Environmental Scientist Telephone: (509) 372-5334
Responsible Official	Scott Vance Vice President, Corporate Governance & General Counsel PO Box 968, Mail Drop 1020, Richland, WA 99352 Telephone: (509) 377-4650 Fax: (509) 372-5330
Industry Type	Electric Services
Categorical Industry	40 CFR Part 423 Steam Electric Power Generating Point Source Category
Type of Treatment	Cooling, disinfection, neutralization (blowdown) Filtration, ion exchange (processed radwaste water)
SIC Codes	4911
NAIC Codes	221113
Facility Location (NAD83/WGS84 reference datum)	Latitude: 46.47170 Longitude: -119.33280
Discharge Waterbody Name and Location (NAD83/WGS84 reference datum)	Columbia River (RM 351.75) Latitude: 46.47139 Longitude: -119.26250
Intake Structures	Latitude: 46.471419 Longitude: -119.262954

Permit Status

Issuance Date of Previous Permit: September 30, 2014

Application for Permit Renewal Submittal Date: May 1, 2019

Date of EFSEC Acceptance of Application: August 6, 2019

Inspection Status

Date of Last Non-sampling Inspection: September 27, 2022

Figure 1 - Facility Location Map

The Columbia Generating Station (CGS) is on the left side of the image with the Columbia River approximately three miles east, along the right border. CGS resides within the Hanford Nuclear Reservation and is approximately 15 miles north of Richland, WA.

II.A. Facility description

1. History

The Columbia Generating Station (CGS) is a 1,236- megawatt boiling water reactor that uses nuclear fission to produce heat. Energy Northwest owns and operates this facility, located on leased land within the U.S. Department of Energy (USDOE) Hanford Site in Benton County about 12 miles north of Richland, Washington. CGS employs about 1,100 people and produces electricity 24 hours a day, 7 days a week when in operation. The reactor is shut down approximately every two years for refueling and maintenance. The last planned outage occurred from May 8 to June 19, 2021. CGS produces eight to nine billion kilowatt-hours of electricity annually, representing four percent of the power consumed in the northwest.

The 1,089 acre site includes several buildings and structures located three miles west of the Columbia River. Construction of the plant began in 1973. The Nuclear Regulatory Commission (NRC) issued an operating license in 1983 and the first electricity was produced in May of 1984. In May 2012, NRC issued a renewed operating license to Energy Northwest, which expires 12/20/2043.

Energy Northwest replaced the main steam condenser during a 2011 refueling outage. The admiralty brass condenser tubes were replaced with titanium to reduce copper content in reactor feed water and blowdown, reduce radiation exposure, and improve operational efficiencies.

2. Industrial Processes

The Columbia Generating Station's (CGS) Standard Industrial Classification (SIC) Code is 4911, Electric Services. The North American Industry Classification System (NAICS) Code is 221113, Nuclear Electric Power Generation. The facility is subject to EPA Categorical Pretreatment Standards 40 Code of Federal Regulations (CFR) Part 423 Steam Electric Power Generating Point Source Category.

The main activity at the site is production of commercial electric power from nuclear energy. The boiling water type nuclear reactor uses light water as the moderator and enriched uranium in pellet form as the nuclear fuel. Demineralized water passes around zirconium tubes containing the reactor fuel in the core and is converted to steam at about 70 atmospheres (1000 psi). The electrical generator is turned by a steam powered turbine converting thermal energy to mechanical energy and ultimately to electrical energy.

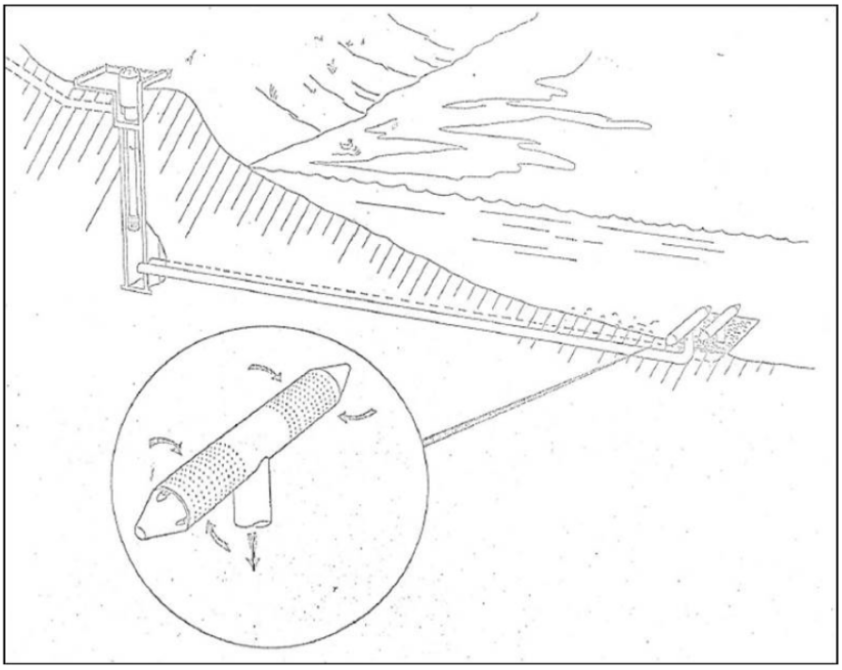
The primary use for the process water is non-contact cooling water. Flow is recirculated through six mechanical draft cooling water towers where heat is rejected to the atmosphere. Evaporation, drift, and blowdown losses are replenished from the Columbia River. CGS also produces potable water and water for use in the reactor on-site.

This NPDES permit covers discharges of pollutants not otherwise covered by EFSEC Council Resolution or other authority, such as the NRC, in any wastewater discharges to waters of the state.

3. Cooling Water Intakes

The CGS cooling water intake consists of two screened cylinders. Each cylinder is 30 feet long and is composed of two intake screens each 6.5 ft long. The screens consist of an outer and inner sleeve of perforated pipe. The outer sleeve is 42" diameter with 3/8" holes and the inner sleeve is 36" diameter with ¾" holes. Columbia River water flows by gravity through the intake structures into the pump well on the river shore, where it is then pumped to the CGS facility. The intake screens were designed for low through-screen velocities to minimize impingement and entrainment.

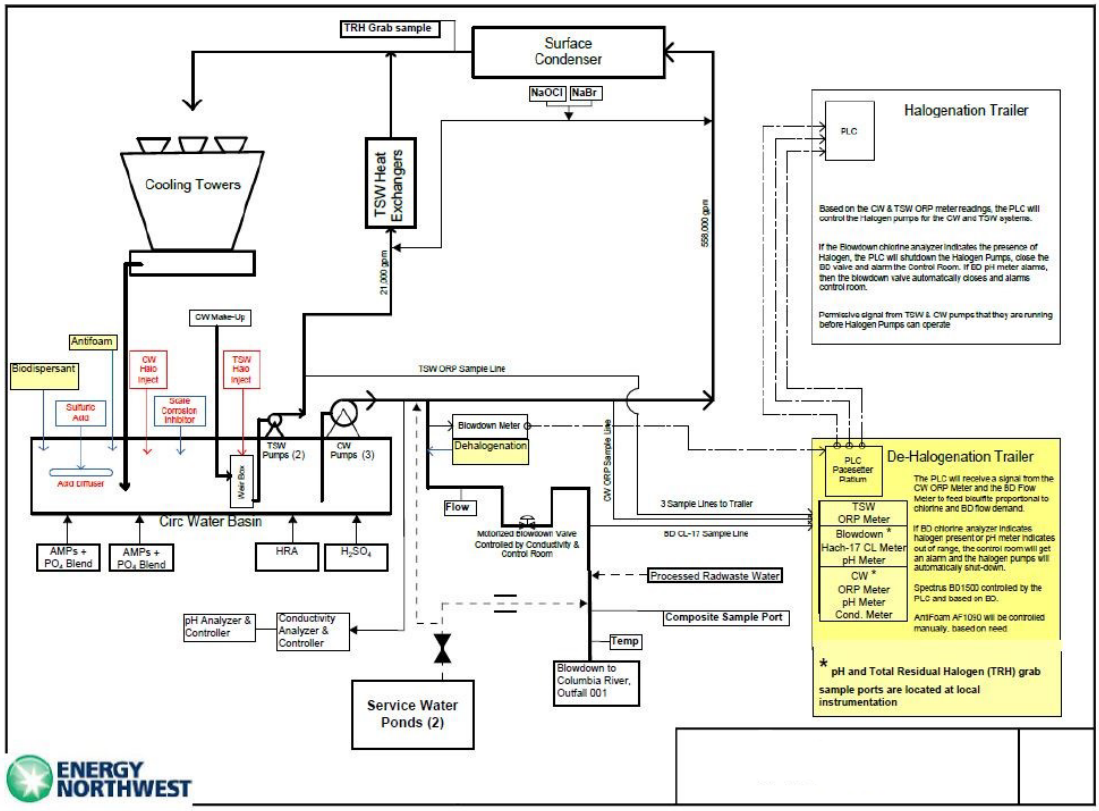
Figure 2 - CGS cooling water intake structures



4. Wastewater Treatment processes discharging to Outfall 001 (Columbia River at RM 351.75)

Figure 3 shows a flow diagram of the circulating cooling water system.

Figure 3 - Cooling Water System Schematic



Circulating cooling water blowdown – The major waste stream, in terms of volume, is the blowdown from the non-contact circulating cooling water system, which cools the steam condenser and associated machinery. This water is circulated at approximately 600,000 gallons per minute (gpm), cooled by the evaporative process in six mechanical draft cooling towers, and recycled. The evaporated water and that lost through drift and blowdown is replenished from the Columbia River at an average rate of about 15,000 gpm. Evaporation of the cooling water results in the concentration of dissolved solids. To limit the buildup of dissolved salts, a portion of the cooling water is released to the river as blowdown through to Outfall 001.

Although the blowdown stream is intended to be a relatively constant discharge, several factors can cause variation in the chemical composition of the discharge. The most important factor is the adjustable blowdown rate that determines the concentration factor for dissolved material in the circulating water. CGS has typically operated between 5 cycles of concentration (about 2,850 gpm blowdown) and 12 cycles of concentration (about 850 gpm blowdown). The permit application reports an average flow of 1.91 MGD.

The chemical composition of the blowdown is affected by the circulating water treatment regime. Sulfuric acid is added to help maintain pH in the range of 8.2 to 8.6 for optimal reduction of biofouling and scale. The water is also treated with DVS3A002 which is a

HEDP (1hydroxy-ethylidne-1, 1, diphosphonate) and AMPs (amino-trimethylene-phosphonate) copolymer blend that functions as a calcium scale inhibitor and a dispersant. Sodium tolyltriazole, which is a halogen-resistant azole (HRA), is added separately for copper alloy corrosion control.

On March 19, 2019 EFSEC modified the NPDES permit to improve the inhibition of biological fouling of the circulating water and plant service water systems. This improvement involves changing from a batch to a continuous halogenation process, with continuous injection of the same halogenation agents (sodium hypochlorite and sodium bromide). CGS adds two additional chemicals to assist the effectiveness of the halogenation, a biodispersant (surfactant) and an antifoaming agent. To prevent the discharge of elevated halogens (i.e., chlorine and bromine derivatives) to Outfall 001, the dehalogenation agent sodium bisulfite is continuously added to the blowdown in a controlled manner. The batch process for microbiocidal treatment is available as a backup procedure in the event of a problem with the effluent total residual halogen (TRH) analyzer or other problem with the continuous halogenation/dehalogenation system.

Another factor causing short-term increases in metal concentrations in the cooling water is the periodic dewatering and mechanical cleaning of the condenser tubes during maintenance outages. Online cooling tower cleaning to remove silt and organic matter can cause some of the material to become re-suspended such that the solids concentration in the blowdowm is slightly higher than normal. Cooling water (and blowdown) suspended solids concentrations are also increased during dust storms and large wildfire events with heavy ambient smoke because the towers act like large air scrubbers. Seasonal increase in makeup water turbidity also results in higher cooling water suspended solids.

Condenser cleaning water - Periodically the main condenser becomes scaled. This reduces plant efficiency to the point that chemical cleaning of the main condenser is necessary. Blowdown to the river will be secured and a cleaning agent, FerroquestTM or equivalent, will be added to the circulating water system. Sodium tolyltriazole will be added for copper metal corrosion protection. After the treated water has circulated a sufficient time to remove most of the scale (estimated to be one or two hours), sodium hydroxide will be added for pH adjustment. At the completion of the cleaning process, if any permit condition is not met, circulating water will be pumped to a storage location using temporary pumps and piping. During this pumping process, the concentration of constituents in the circulating water will be reduced by the addition of makeup water from the river. When the circulating water meets all conditions for discharge, blowdown to the river will be initiated. After the condenser cleaning process is completed, the stored water will be treated as necessary to meet discharge requirements. Following achievement of discharge limits, the water will be pumped back to the circulating water basin at CGS. Sediment from the cleaning process will be analyzed and disposed in accordance with the solid waste control plan.

Standby Service Water (SSW) system– The SSW system removes reactor decay heat during normal shutdown conditions and provides a heat sink for emergency equipment

during a plant transient or accident. The SSW system is a closed-loop circulating water system that draws cooling water from an onsite reservoir, and returns heated water to the reservoir. The primary reason for discharging service water is to reduce the concentration of sulfur or chlorides that have the potential to induce corrosion. Other reasons for discharging include the need to perform maintenance on the submerged components in the spray ponds, the need to clean out accumulations of sediments in the ponds, or to reduce suspended solids in the ponds. Infrequently, several million gallons of standby service water might be released to the blowdown line or to the cooling water system over a period of a couple days to multiple weeks. This water tends to be of lower cycles of concentration than the circulating cooling water. No discharges from the SSW system occurred during the previous permit term.

Radioactive wastewater treatment system effluent – This is treated wastewater from the "primary water system" (reactor water for steam production) that Energy Northwest must occasionally discharge when the plant storage inventory is full or if the total organic content of the water is too high to be used in the plant. This is relatively pure, low conductivity water that is released in batches of about 15,000 gallons at rates of up to 190 gpm. It is filtered and treated through an ion exchange process to reduce radioactive impurities prior to discharge. There have been no releases from this system since September 19, 1998.

Plant Service Water (TSW) - During Plant Service Water (TSW) system outages approximately 110,000 gallons of TSW water is drained via the blowdown line. The TSW system maintenance is infrequent and occurs approximately every ten years.

5. Evaporation Ponds

A series of double-lined, evaporative lagoons is located approximately 1500 feet northeast of the plant. Runoff from the power block building and stormwater collected in the bermed area around the Diesel Fuel Polishing Building is discharged to the evaporations ponds. Non-stormwater wastewater streams discharging into the evaporation ponds include backwash from the potable water and process water treatment systems, sumps and floor drains, and the fire protection system. These lagoons do not discharge into surface waters or ground waters.

6. Stormwater

Stormwater runoff from parking lots, support building, and other impervious surfaces are discharged to multiple UIC wells at the facility. The UIC wells are registered with the statewide Underground Injection Control (UIC) program[9]. The proposed permit requires Energy Northwest to submit an update to the stormwater pollution prevention plan (SWPPP) developed during the previous permit cycle.

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

7. Sanitary wastes

Sanitary waste from the facility is piped to a treatment system located approximately one-half mile to the southeast. The facility uses aeration lagoons and facultative stabilization ponds to treat sanitary waste. Discharge of treated wastewater to ground is regulated under Temporary State Waste Discharge permit ST0501312.

8. Solid wastes

Several waste streams from the facility are addressed in the Solid Waste Control Plan. General refuse, scrap metal, metal and polyurethane drums, and worn vehicle and equipment tires are recycled or disposed of off-site. Demolition and construction debris are primarily disposed of at the City of Richland Municipal Landfill. Energy Northwest can also dispose of some waste in the onsite inert waste landfill. Used oil and hydraulic fluid is collected in drums until recyclable quantities are accumulated and transported off-site for recycling. Petroleum contaminated soils are land-farmed at the City of Richland Municipal Landfill or transported to a hazardous waste landfill off-site.

Cooling system sediments from the cooling tower decks and basins are collected approximately annually and placed in a disposal cell south of the towers. Sediments are periodically removed from the service water spray ponds and disposed of in the cooling tower sediment disposal cells.

EFSEC Council Resolution or other authority such as the Nuclear Regulatory Commission regulates the handling, treatment, storage, disposal and release of dangerous and radioactive wastes. The scope of this proposed permit does not include these activities beyond the requirement in S5.A to follow the procedures in the most current resolution pertaining to the disposal of sediments from the cooling water system and double-lined impoundment.

9. Discharge outfall

The treated effluent flows into the Columbia River through Outfall 001 at river mile 351.75. At minimum river flow of 36,000 cfs, a buried 18-inch pipe emerges at the outfall approximately 175 feet from the west shoreline and at a depth of seven feet. The slot-nozzle outfall is aligned perpendicular to the river flow, is 8-inches high, 32-inches wide and extends upwards from the river bed at a 15° angle.

II.B. Description of the receiving water

Columbia Generating Station discharges to the Columbia River at rive mile 351.75. No other point source outfalls are nearby. Significant nearby non-point sources of pollutants include discharges from agricultural areas to the east and north along the Columbia River. Nearby drinking water intakes include one for the facility approximately 700 feet upstream and those of the Cities of Richland and Pasco located approximately 12 miles downstream to the south. Section III.D of this fact sheet describes any receiving waterbody impairments.

The ambient background data used for this permit includes the following from Ecology's ambient monitoring location 36A070 (Columbia River at Vernita Bridge, upstream from the discharge), from 1990-present:

Table 2 - Ambient Background Data

Parameter	Value Used
Temperature (90th percentile 1-DMax)	19.5 °C
pH (90th/10th percentile)	8.4/7.8 standard units
Dissolved Oxygen (10th percentile)	9.7 mg/L
Total Ammonia-N	0.041 mg/L (from permit application, intake water data)
E.coli (average)	10/100 mL
Turbidity (average)	1.5 NTU
Hardness	65 mg/L as CaCO3
Alkalinity	60.4 mg/L as CaCO3
Chromium (dissolved, 90th percentile)	0.60 µg/L
Copper	1.2 µg/L
Lead	0.075 µg/L
Nickel	1.1 µg/L
Silver	Not detected
Zinc	4.5 µg/L

II.C. Wastewater characterization

Energy Northwest reported the concentration of pollutants in the discharge in the permit application and in discharge monitoring reports. The tabulated data represents the quality of the wastewater effluent discharged from November 2014 through May 2022. Of the priority pollutants, only those with detected results are listed here.

Table 3 - Wastewater Characterization, Outfall 001

Parameter	Units	# of Samples	Average Value	Maximum Value
Flow - monthly average	MGD	monthly	2.2	4.7
Flow - daily max	MGD	daily	2.2	6.7
Temperature	°C	daily	26.7	33.1 (95th %tile)
Turbidity	NTU	90	9	26 (95th %tile)
Total Residual Halogen	mg/L	continuous monitor	<0.1	<0.1
Chromium, Total	µg/L	97	1.4	2.8 (95th %tile)
Copper, Total	µg/L	97	14	20 (95th %tile)
Zinc, Total	µg/L	97	19	38 (95th %tile)
Biochemical Oxygen Demand (BOD_5)	mg/L	3	<2.0	<2.0
Chemical Oxygen Demand (COD)	mg/L	3	37	39
Total Organic Carbon	mg/L	3	13	15
Total Suspended Solids (TSS)	mg/L	37	9.1	45
Ammonia (as N)	mg/L	37	0.071	0.250

Table 3 - Wastewater Characterization, Outfall 001 continued

Parameter	Units	# of Samples	Average Value	Maximum Value
Bromide	mg/L	3	13.6	16.0
Chlorine	mg/L	3	<0.1	<0.1
Color	CU	3	10	10
Fecal Coliform	#/100 ml	3	3.3	7.8
Fluoride	mg/L	37	0.65	0.90
Nitrate-Nitrite (as N)	mg/L	37	1.24	3.25
Nitrogen, Total Organic (as N)	mg/L	3	1.35	1.52
Oil and Grease	mg/L	4	0	<1
Phosphorus, Total (as P)	mg/L	37	2.68	3.44
Beta Radioactivity, Total	pCi/L	36	7.48	17.1
Sulfate	mg/L	37	572	760
Aluminum, Total	mg/L	3	0.18	0.18
Barium, Total	mg/L	37	0.28	0.37
Boron, Total	mg/L	3	0.0378	0.0479
Cobalt, Total	mg/L	3	0.00041	0.00042
Iron, Total	mg/L	37	0.37	1.3
Magnesium, Total	mg/L	37	44	58
Molybdenum, Total	mg/L	3	0.0079	0.0081
Manganese, Total	mg/L	37	0.034	0.092
Tin, Total	mg/L	3	<0.001	<0.001
Titanium, Total	mg/L	37	0.019	0.066
Antimony, Total	µg/L	7	1.3	1.6
Arsenic, Total	µg/L	37	6.4	9.5
Lead, Total	µg/L	37	0.9	3.5
Mercury, Total	ng/L	7	2.27	4.07
Nickel, Total	µg/L	37	7.7	12
Selenium, Total	µg/L	37	3.6	7.4
Silver, Total	µg/L	37	0.015	0.24
Bromoform	µg/L	7	0.20	0.63
2-Nitrophenol	µg/L	4	0.21	0.54
4-Nitrophenol	µg/L	4	0.47	1.56
Bis(2-Ethylhexyl) Phthalate	µg/L	4	0.98	2.16

Parameter	Units	# of Samples	Minimum Value	Maximum Value
pH	s.u.	Continuous monitor	6.8	8.8

II.D. Summary of compliance with previous permit Issued

The previous permit placed effluent limits on flow, pH, acute toxicity, total residual halogens, total chromium, total zinc, polychlorinated biphenyl compounds (PCBs), and 126 priority pollutants (40 CFR 423 Appendix A) contained in chemicals added for cooling tower maintenance, except chromium and zinc.

CGS has complied with the effluent limits and permit conditions throughout the duration of the permit issued on September 30, 2014. EFSEC assessed compliance based on its review of the facility's information in Ecology's Permitting and Reporting Information System (PARIS), discharge monitoring reports (DMRs) and on inspections.

The following table summarizes compliance with report submittal requirements over the permit term.

Table 4 - Permit Submittals

Submittal Name	Due Date	Received Date	Permit Section
Application for permit renewal	5/1/2019	4/30/2019	S.6
Chronic toxicity - Testing when there is no permit limit - results	5/1/2019	1/21/2019	S.19.F
Acute toxicity - compliance testing for acute toxicity	4/30/2015	3/12/2015	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/31/2015	5/14/2015	S.13.A
Acute toxicity - compliance testing for acute toxicity	10/31/2015	9/21/2015	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/31/2016	12/3/2015	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2016	3/9/2016	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/31/2016	6/20/2016	S.13.A
Acute toxicity - compliance testing for acute toxicity	10/31/2016	9/12/2016	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/31/2017	11/30/2016	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2017	3/20/2017	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/31/2017	6/6/2017	S.13.A
Acute toxicity - compliance testing for acute toxicity	10/31/2017	9/11/2017	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/31/2018	11/29/2017	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2017	4/4/2017	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2018	3/14/2018	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/30/2018	6/12/2018	S.13.A
Acute toxicity - compliance testing for acute toxicity	10/30/2018	9/5/2018	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/30/2019	12/6/2018	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2019	2/21/2019	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/30/2019	5/21/2019	S.13.A
Acute toxicity - compliance testing for acute toxicity	10/30/2019	9/9/2019	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/30/2020	12/17/2019	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2020	3/9/2020	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/30/2020	5/27/2020	S.13.A

Table 4 – Permit Submittals continued

Submittal Name	Due Date	Received Date	Permit Section
Acute toxicity - compliance testing for acute toxicity	10/30/2020	9/2/2020	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/30/2021	12/14/2020	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2021	2/24/2021	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/30/2021	5/27/2021	S.13.A
Acute toxicity - compliance testing for acute toxicity	10/30/2021	9/9/2021	S.13.A
Acute toxicity - compliance testing for acute toxicity	1/30/2022	12/9/2021	S.13.A
Acute toxicity - compliance testing for acute toxicity	4/30/2022	2/16/2022	S.13.A
Acute toxicity - compliance testing for acute toxicity	7/30/2022	5/24/2022	S.13.A
Outfall evaluation	5/1/2019	1/17/2019	S.11
Operation and maintenance manual for evaporative pond system	12/1/2014	3/31/2014	S.4.Aa1/S7
Submit a notice of completion of double-lined impoundment	5/1/2015	5/1/2015	S.7
Spill control plan update with permit application	5/1/2019	10/10/2018	S.9.A.1
Solid Waste Control Plan Update with permit application	5/1/2019	10/10/2018	S.5.C
Scope of work for analysis of circulating cooling H2O losses	11/1/2016	10/31/2016	S.7.3
Scope of work for analysis of circulating cooling H2O losses	11/1/2016	8/1/2017	S.7.3
Scope of work for analysis of circulating cooling H2O losses	11/1/2016	8/23/2017	S.7.3
Engineering Report for Circulating Cooling Water System Losses	5/1/2019	4/24/2019	S.7.4
Ground Water Quality Assurance Project Plan (QAPP) Update	5/1/2015	4/30/2015	S.7.5
Ground Water (QAPP) Update-Tasks 1-5 Findings	5/1/2019	4/22/2019	S.7.6
Report Relocation of temperature monitoring location	11/15/2015	11/1/2015	S.7.7/G21
Report Installation of sampling equip to collect 24 hour comp samples	11/15/2015	10/22/2015	S.7.8/G21
Storm Water Pollution Prevention Plan (SWPPP)	11/1/2015	10/22/2015	S.10
Cooling Water Intake Structure O&M Manual	11/1/2015	10/27/2015	S.12.A.1.a
Entrainment Characterization Study Design	11/1/2015	10/28/2015	S.12.B.1
Entrainment Characterization Study Report	5/1/2019	2/12/2019 (interim) 2/26/2020 (final)	S.12.B.2

II.E. State environmental policy act (SEPA) compliance

State law exempts the issuance, reissuance or modification of any wastewater discharge permit from the SEPA process as long as the permit contains conditions that are no less stringent than federal and state rules and regulations (RCW 43.21C.0383[10]). The exemption applies only to existing discharges, not to new discharges.

III. Proposed Permit Limits

Federal and state regulations require that effluent limits in an NPDES permit must be either technology- or water quality-based.

- Technology-based limits are based upon the treatment methods available to treat specific pollutants. Technology-based limits are set by the EPA and published as a regulation, or EFSEC develops the limit on a case-by-case basis (40 CFR 125.3[11], and chapter 173-220 WAC[12]).
- Water quality-based limits are calculated so that the effluent will comply with the Surface Water Quality Standards (chapter 173-201A WAC[13]), Ground Water Standards (chapter 173-200 WAC[14]), Sediment Quality Standards (chapter 173-204 WAC[15]), or the Federal Water Quality Criteria Applicable to Washington (40 CFR 131.45[16]).
- EFSEC must apply the most stringent of these limits to each parameter of concern. These limits are described below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, etc.). EFSEC evaluated the permit application and determined the limits needed to comply with the rules adopted by the state of Washington. EFSEC does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation.

The proposed permit does not include limits for pollutants not reported in the permit application but may be present in the discharge. The permit does not authorize discharge of the non-reported pollutants. During the five-year permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify EFSEC if significant changes occur in any constituent [40 CFR 122.42(a)[17]]. Until EFSEC modifies the permit to reflect additional discharge of pollutants, a permitted facility could be violating its permit.

[10] http://app.leg.wa.gov/RCW/default.aspx?cite=43.21C.0383
[11] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-125#125.3
[12] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-220
[13] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A
[14] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200
[15] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-204
[16] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-131#131.45
[17] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.42

III.A. Technology-based effluent limits

EFSEC must ensure that facilities provide all known, available, and reasonable methods of prevention, control, and treatment (AKART) when it issues a permit. Technology-based effluent limitations for steam electric power generation are detailed in 40 CFR 423.

Applicable standards for Columbia Generating Station are best available technology economically achievable (BAT) standards in 40 CFR 423.13.

The technology-based limit for total residual halogen, PCBs, and priority pollutants are based on 40 CFR 423.13. Application of the BAT standards (200 µg/L chromium, 1,000 µg/L zinc) would result in potential violation of water quality standards. Columbia Generating Station does not add chemicals containing chromium and zinc to the cooling tower discharge. Therefore, the previous permit established limits for chromium and zinc that are protective of water quality standards without allowing for dilution. These limits are achievable based on demonstrated performance and are considered to be technology-based effluent limits.

Limits for pH and flow are based on demonstrated performance at the facility.

Table 5 - Technology-based Limits

Parameter	Average Monthly Limit	Maximum Daily Limit
Flow	5.6 million gallons/day (mgd)	9.4 mgd
Total Residual Halogen	NA	0.1 mg/L[1]
Chromium (Total)	8.2 µg/L	16.4 µg/L
Zinc (Total)	53 µg/L	107 µg/L
PCBs	No discharge	No discharge
126 priority pollutants (40 CFR 423 Appendix A) contained in chemicals added for cooling tower maintenance, except chromium and zinc	No detectable amount	No detectable amount

Parameter	Daily Minimum	Daily Maximum
pH	6.5 standard units	9.0 standard units

[1]Total Residual Halogen: BAT effluent limits at 40 CFR 423.13(d)(1) for free available chlorine are maximum concentration 0.5 mg/L and average 0.2 mg/L. The proposed maximum daily limit of 0.1 mg/L total residual halogen is more protective than the BAT chlorine limits. This is the same limit as in the previous permit and the facility is able to comply with it.

III.B. Surface water quality-based effluent limits

The Washington State surface water quality standards (chapter 173-201A WAC[18]) are designed to protect existing water quality and preserve the beneficial uses of Washington's surface waters. Waste discharge permits must include conditions that ensure the discharge

[18] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A

will meet the surface water quality standards (WAC 173-201A-510). Water quality-based effluent limits may be based on an individual waste load allocation or on a waste load allocation developed during a basin wide total maximum daily load study (TMDL).

1. Numeric criteria for the protection of aquatic life and recreation

Numeric water quality criteria are listed in the water quality standards for surface waters (chapter 173-201A WAC). They specify the maximum levels of pollutants allowed in receiving water to protect aquatic life and recreation in and on the water. EFSEC uses numeric criteria along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

2. Numeric criteria for the protection of human health

Numeric criteria for the protection of human health are promulgated in Chapter 173-201A WAC and 40 CFR 131.45[19]. These criteria are designed to protect human health from exposure to pollutants linked to cancer and other diseases, based on consuming fish and shellfish and drinking contaminated surface waters. The water quality standards also include radionuclide criteria to protect humans from the effects of radioactive substances.

3. Narrative criteria

Narrative water quality criteria (e.g., WAC 173-201A-240(1)) limit the toxic, radioactive, or other deleterious material concentrations that the facility may discharge to levels below those which have the potential to:

- Adversely affect designated water uses.
- Cause acute or chronic toxicity to biota.
- Impair aesthetic values.
- Adversely affect human health.

Narrative criteria protect the specific designated uses of all fresh waters (WAC 173-201A-200) and of all marine waters (WAC 173-201A-210) in the state of Washington.

4. Antidegradation

The purpose of Washington's Antidegradation Policy (WAC 173-201A-300-330) is to:

- Restore and maintain the highest possible quality of the surface waters of Washington.
- Describe situations under which water quality may be lowered from its current condition.
- Apply to human activities that are likely to have an impact on the water quality of surface water.
- Ensure that all human activities likely to contribute to a lowering of water quality, at a minimum, apply all known, available, and reasonable methods of prevention, control, and treatment (AKART).

[19] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-131#131.45

- Apply three tiers of protection (described below) for surface waters of the state.

  Tier I: ensures existing and designated uses are maintained and protected and applies to all waters and all sources of pollutions.

  Tier II: ensures that waters of a higher quality than the criteria assigned are not degraded unless such lowering of water quality is necessary and in the overriding public interest. Tier II applies only to a specific list of polluting activities.

  Tier III: prevents the degradation of waters formally listed as "outstanding resource waters," and applies to all sources of pollution.

A facility must prepare a Tier II analysis when all three of the following conditions are met:

- The facility is planning a new or expanded action.
- EFSEC regulates or authorizes the action.
- The action has the potential to cause measurable degradation to existing water quality at the edge of a chronic mixing zone.

Facility Specific Requirements – This facility must meet Tier I requirements.

- Dischargers must maintain and protect existing and designated uses. EFSEC must not allow any degradation that will interfere with, or become injurious to, existing or designated uses, except as provided for in chapter 173-201A WAC.
- EFSEC's analysis described in this section of the fact sheet demonstrates that the proposed permit conditions will protect existing and designated uses of the receiving water.

5. Mixing zones

A mixing zone is the defined area in the receiving water surrounding the discharge port(s), where wastewater mixes with receiving water. Within mixing zones the pollutant concentrations may exceed water quality numeric standards, so long as the discharge doesn't interfere with designated uses of the receiving water body (for example, recreation, water supply, and aquatic life and wildlife habitat, etc.) The pollutant concentrations outside of the mixing zones must meet water quality numeric standards.

State and federal rules allow mixing zones because the concentrations and effects of most pollutants diminish rapidly after discharge, due to dilution. EFSEC defines mixing zone sizes to limit the amount of time any exposure to the end-of-pipe discharge could harm water quality, plants, or fish.

The state's water quality standards allow EFSEC to authorize mixing zones for the facility's permitted wastewater discharges only if those discharges already receive all known, available, and reasonable methods of prevention, control, and treatment (AKART). Mixing zones typically require compliance with water quality criteria within a specified distance from the point of discharge and must not use more than 25% of the available width of the water body for dilution (WAC 173-201A-400 (7)(a)(ii-iii)).

EFSEC uses modeling to estimate the amount of mixing within the mixing zone. Through modeling EFSEC determines the potential for violating the water quality standards at the edge of the mixing zone and derives any necessary effluent limits. Steady-state models are the most frequently used tools for conducting mixing zone analyses. EFSEC chooses values for each effluent and for receiving water variables that correspond to the time period when the most critical condition is likely to occur. Each critical condition parameter, by itself, has a low probability of occurrence and the resulting dilution factor is conservative. The term "reasonable worst-case" applies to these values.

The mixing zone analysis produces a numeric value called a dilution factor (DF). A dilution factor represents the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. For example, a dilution factor of 4 means the effluent is 25% and the receiving water is 75% of the total volume of water at the boundary of the mixing zone. EFSEC uses dilution factors with the water quality criteria to calculate reasonable potentials and effluent limits. Water quality standards include both aquatic life-based criteria and human health-based criteria. The former are applied at both the acute and chronic mixing zone boundaries; the latter are applied only at the chronic boundary. The concentration of pollutants at the boundaries of any of these mixing zones may not exceed the numerical criteria for that zone.

Each aquatic life acute criterion is based on the assumption that organisms are not exposed to that concentration for more than one hour and more often than one exposure in three years. Each aquatic life chronic criterion is based on the assumption that organisms are not exposed to that concentration for more than four consecutive days and more often than once in three years.

The two types of human health-based water quality criteria distinguish between those pollutants linked to non-cancer effects (non-carcinogenic) and those linked to cancer effects (carcinogenic). The human health-based water quality criteria incorporate several exposure and risk assumptions. These assumptions include:

- A 70-year lifetime of daily exposures.
- An ingestion rate for fish or shellfish measured in kg/day.
- An ingestion rate of two and four tenths (2.4) liters/day for drinking water (increased from two liters/day in the 2016 Water Quality Standards update).
- A one-in-one-million cancer risk for carcinogenic chemicals.

This permit authorizes a small acute mixing zone, surrounded by a chronic mixing zone around the point of discharge (WAC 173-201A-400). The water quality standards impose certain conditions before allowing the discharger a mixing zone:

a. EFSEC must specify both the allowed size and location in a permit.

The proposed permit specifies the size and location of the allowed mixing zone (as specified below).

b. The facility must fully apply "all known, available, and reasonable methods of prevention, control and treatment" (AKART) to its discharge.

EFSEC has determined that the treatment provided at Columbia Generating Station meets the requirements of AKART (see "Technology-based Limits").

c. EFSEC must consider critical discharge conditions.

Surface water quality-based limits are derived for the water body's critical condition (the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or designated waterbody uses). The critical discharge condition is often pollutant-specific or waterbody-specific.

Critical discharge conditions are those conditions that result in reduced dilution or increased effect of the pollutant. Factors affecting dilution include the depth of water, the density stratification in the water column, the currents, and the rate of discharge. Density stratification is determined by the salinity and temperature of the receiving water. Temperatures are warmer in the surface waters in summer. Therefore, density stratification is generally greatest during the summer months. Density stratification affects how far up in the water column a freshwater plume may rise. The rate of mixing is greatest when an effluent is rising. The effluent stops rising when the mixed effluent is the same density as the surrounding water. After the effluent stops rising, the rate of mixing is much more gradual. Water depth can affect dilution when a plume might rise to the surface when there is little or no stratification. Ecology's Permit Writer's Manual[20] describes additional guidance on criteria/design conditions for determining dilution factors.

Table 6 - Critical Conditions Used to Model the Discharge

Critical Condition	Value
Seven-day-average low river flow with a recurrence interval of ten years (7Q10)	52,700 cubic feet per second (cfs)
River depth at the 7Q10 period	8.5 feet
River velocity	5.35 ft per second
Manning roughness coefficient	0.02
Channel width	1,400 feet
Maximum average monthly effluent flow for chronic and human health non-carcinogen	4.3 MGD
Annual average flow for human health carcinogen	2.8 MGD
Maximum daily flow for acute mixing zone	5.9 MGD
7-DAD MAX/1-DAD-MAX Effluent temperature	31.9°C

EFSEC obtained ambient data at critical conditions in the vicinity of the outfall from the permit application, DMRs and the *Energy Northwest Columbia Generating Station Effluent Mixing Study* (R. E. Welch Environmental Services, 2008).

[20] https://apps.ecology.wa.gov/publications/summarypages/92109.html

d. Supporting information must clearly indicate the mixing zone would not:

- Have a reasonable potential to cause the loss of sensitive or important habitat.
- Substantially interfere with the existing or characteristic uses.
- Result in damage to the ecosystem.
- Adversely affect public health.

Ecology established Washington State water quality criteria for toxic chemicals using EPA criteria. EPA developed the criteria using toxicity tests with numerous organisms and set the criteria to generally protect the species tested and to fully protect all commercially and recreationally important species.

EPA sets acute criteria for toxic chemicals assuming organisms are exposed to the pollutant at the criteria concentration for one hour. They set chronic standards assuming organisms are exposed to the pollutant at the criteria concentration for four days. Dilution modeling under critical conditions generally shows that both acute and chronic criteria concentrations are reached within minutes of discharge.

The discharge plume does not impact drifting and non-strong swimming organisms because they cannot stay in the plume close to the outfall long enough to be affected. Strong swimming fish could maintain a position within the plume, but they can also avoid the discharge by swimming away. Mixing zones generally do not affect benthic organisms (bottom dwellers) because the buoyant plume rises in the water column. EFSEC has additionally determined that the effluent will not exceed 33 degrees C for more than two seconds after discharge; and that the temperature of the water will not create lethal conditions or blockages to fish migration.

EFSEC evaluates the cumulative toxicity of an effluent by testing the discharge with whole effluent toxicity (WET) testing.

EFSEC reviewed the above information, the specific information on the characteristics of the discharge, the receiving water characteristics and the discharge location. Based on this review, EFSEC concluded that the discharge does not have a reasonable potential to cause the loss of sensitive or important habitat, substantially interfere with existing or characteristics uses, result in damage to the ecosystem, or adversely affect public health if the permit limits are met.

e. The discharge/receiving water mixture must not exceed water quality criteria outside the boundary of a mixing zone.

EFSEC conducted a reasonable potential analysis, using procedures established by the EPA and by Ecology, for each pollutant and concluded the discharge/receiving water mixture will not violate water quality criteria outside the boundary of the mixing zone if permit limits are met.

f. The size of the mixing zone and the concentrations of the pollutants must be minimized.

At any given time, the effluent plume uses only a portion of the acute and chronic mixing zone, which minimizes the volume of water involved in mixing. The plume mixes as it rises through the water column therefore much of the receiving water volume at lower depths in the mixing zone is not mixed with discharge. Similarly, because the discharge may stop rising at some depth due to density stratification, waters above that depth will not mix with the discharge. EFSEC determined it is impractical to specify in the permit the actual, much more limited volume in which the dilution occurs as the plume rises and moves with the current.

EFSEC minimizes the size of mixing zones by requiring dischargers to install diffusers when they are appropriate to the discharge and the specific receiving waterbody. When a diffuser is installed, the discharge is more completely mixed with the receiving water in a shorter time. EFSEC also minimizes the size of the mixing zone (in the form of the dilution factor) using design criteria with a low probability of occurrence. For example, EFSEC uses the expected 95th percentile pollutant concentration, the 90th percentile background concentration, the centerline dilution factor, and the lowest flow occurring once in every ten years to perform the reasonable potential analysis.

Because of the above reasons, EFSEC has effectively minimized the size of the mixing zone authorized in the proposed permit.

g. Maximum size of mixing zone.

The authorized mixing zone does not exceed the maximum size restriction.

h. Acute mixing zone.

- The discharge/receiving water mixture must comply with acute criteria as near to the point of discharge as practicably attainable.

EFSEC determined the acute criteria will be met at 10% of the distance of the chronic mixing zone at the ten year low flow.

- The pollutant concentration, duration, and frequency of exposure to the discharge will not create a barrier to migration or translocation of indigenous organisms to a degree that has the potential to cause damage to the ecosystem.

As described above, the toxicity of any pollutant depends upon the exposure, the pollutant concentration, and the time the organism is exposed to that concentration. Authorizing a limited acute mixing zone for this discharge assures that it will not create a barrier to migration. The effluent from this discharge will rise as it enters the receiving water, assuring that the rising effluent will not cause translocation of indigenous organisms near the point of discharge (below the rising effluent).

- Comply with size restrictions.

The mixing zone authorized for this discharge complies with the size restrictions published in chapter 173-201A WAC.

i. Overlap of Mixing Zones.

This mixing zone does not overlap another mixing zone.

III.C. Designated uses and surface water quality criteria

Applicable designated uses and surface water quality criteria are defined in chapter 173-201A WAC[21]. The table included below summarizes the criteria applicable to this facility's discharge.

1. Freshwater Aquatic Life Uses and Associated Criteria

Aquatic Life Uses are designated based on the presence of, or the intent to provide protection for the key uses. All indigenous fish and non-fish aquatic species must be protected in waters of the state in addition to the key species. The Aquatic Life Uses for this receiving water are identified below.

Table 7 - Salmonid Spawning, Rearing, and Migration

Criteria	Value
Temperature Criteria – Highest 7-DAD MAX	20°C (68°F) Temperature must not exceed a 1-DMax of 20°C due to human activities. When natural conditions exceed a 1-DMax of 20°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed t=34/(T+9)
Dissolved Oxygen Criteria – Lowest 1-Day Minimum	8.0 mg/L
Turbidity Criteria	5 NTU over background when the background is 50 NTU or less; or A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Total Dissolved Gas Criteria	Total dissolved gas must not exceed 110 percent of saturation at any point of sample collection.
pH Criteria	The pH must measure within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.5 units.

2. Recreational use and criteria

The recreational use for this receiving water is primary contact recreation. *E.coli* organism levels must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL.

[21] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A

3. Water supply uses
The water supply uses are domestic, agricultural, industrial, and stock watering.

4. Miscellaneous freshwater uses
The miscellaneous freshwater uses are wildlife habitat, harvesting, commerce and navigation, boating, and aesthetics.

III.D. Water quality impairments

Portions of the Columbia River are listed on the current 303(d) as impaired for temperature, bacteria, dissolved oxygen, pH, PCBs, aldrin, chlordane, dieldrin, and 4,4'-DDE. There are no listed impairments in the vicinity of the CGS outfall.

EPA completed a Total Maximum Daily Load (TMDL) Analysis to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin (Ecology Publication 09-10-058[22]) in 1991. This publication is a United States Environmental Protection Agency document.

The Total Maximum Daily Load (TMDL) for Total Dissolved Gas in the Mid-Columbia River and Lake Roosevelt, developed jointly by Washington State, the Spokane Tribe of Indians, and EPA, addresses total dissolved gas (TDG) in the Columbia River and Lake Roosevelt from the Canadian border to the Snake River (Ecology Publication 04-03-002[23]). Elevated TDG levels, which can cause "gas bubble trauma" in fish, are caused by spills from Mid-Columbia dams and by upstream sources. Separate allocations apply to fish passage and non-fish passage conditions. Allocations must be met below the spillway of each dam (near the end of the aerated zone). The implementation plan describes compliance with both Endangered Species Act and TMDL requirements.

The Columbia and Lower Snake Rivers are listed on the state's polluted waters list for high water temperatures that are above Washington water quality standards and can harm aquatic life. Because the Columbia and Snake Rivers cross multiple state boundaries and span almost 900 miles, the federal Environmental Protection Agency (EPA) published the Total Maximum Daily Load (TMDL) for temperature in the Columbia and Lower Snake Rivers[24] on May 20, 2020. EPA used heat load (the product of temperature, flow, and a conversion factor) to determine Wasteload Allocations (WLAs) for three main source categories: tributaries, current and future point sources subject to NPDES permits, and nonpoint source impacts from dams and reservoirs. The TMDL includes a waste load allocation (WLA) for the Columbia Generating Station.

III.E. Evaluation of surface water quality-based effluent limits for narrative criteria

EFSEC must consider the narrative criteria described in WAC 173-201A-260[25] when it determines permit limits and conditions. Narrative water quality criteria limit the toxic, radioactive, or other deleterious material concentrations that the facility may discharge which

[22] https://apps.ecology.wa.gov/publications/SummaryPages/0910058.html
[23] https://apps.ecology.wa.gov/publications/summarypages/0403002.html
[24] https://www.epa.gov/columbiariver/tmdl-temperature-columbia-and-lower-snake-rivers
[25] https://apps.leg.wa.gov/wac/default.aspx?cite=173-201A-260

have the potential to adversely affect designated uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health.

EFSEC considers narrative criteria when it evaluates the characteristics of the wastewater and when it implements all known, available, and reasonable methods of treatment and prevention (AKART) as described above in the technology-based limits section. When EFSEC determines if a facility is meeting AKART it considers the pollutants in the wastewater and the adequacy of the treatment to prevent the violation of narrative criteria.

In addition, EFSEC considers the toxicity of the wastewater discharge by requiring whole effluent toxicity (WET) testing when there is a reasonable potential for the discharge to contain toxics. EFSEC's analysis of the need for WET testing for this discharge is described later in the fact sheet.

III.F. Evaluation of surface water quality-based effluent limits for numeric criteria

1. Mixing zones and dilution factors

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near field) or at a considerable distance from the point of discharge (far field). Toxic pollutants, for example, are near-field pollutants; their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as biological oxygen demand (BOD) is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating surface water quality based effluent limits varies with the point at which the pollutant has its maximum effect.

With technology-based controls (AKART), predicted pollutant concentrations in the discharge exceed water quality criteria. EFSEC therefore authorizes a mixing zone in accordance with the geometric configuration, flow restriction, and other restrictions imposed on mixing zones by chapter 173-201A WAC[26].

The diffuser at Outfall 001 is a single port structure aligned perpendicular to the river flow. It is 8-inches high, 32-inches wide, and extends upwards from the river bed at a 15 degree angle. The diffuser depth is 8.5 feet during critical low flow conditions. EFSEC obtained this information from the *Energy Northwest Columbia Generating Station Effluent Mixing Study*, June 2008.

Chronic Mixing Zone – WAC 173-201A-400(7)(a) specifies that mixing zones must not extend in a downstream direction from the discharge ports for a distance greater than 300 feet plus the depth of water over the discharge ports or extend upstream for a distance of over 100 feet, not utilize greater than 25% of the flow, and not occupy greater than 25% of the width of the water body. The mixing zone extends from the bottom to the top of the water column.

[26] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A

The chronic dilution factor below is based on a downstream distance of 308 feet.

Acute Mixing Zone – WAC 173-201A-400(8)(a) specifies that in rivers and streams a zone where acute toxics criteria may be exceeded must not extend beyond 10% of the distance towards the upstream and downstream boundaries of the chronic zone, not use greater than 2.5% of the flow and not occupy greater than 25% of the width of the water body. The mixing zone extends from the bottom to the top of the water column.

The acute dilution factor below is based on a downstream distance of 31 feet.

EFSEC determined the dilution factors that occur within these zones at the critical condition based on review of the *Energy Northwest Columbia Generating Station Effluent Mixing Study*, July 2008. Ecology's *Permit Writer's Manual* recommends that dilution for human health criteria be evaluated at the harmonic mean flow for carcinogens and 30Q5 for non-carcinogens. The study did not evaluate these conditions. Therefore, EFSEC used the dilution factor for aquatic life chronic criteria as a conservative estimate to evaluate human health criteria.

The study used the CORMIX Hydrodynamic Mixing Zone Model (CORMIX1 – Version 5.0). Energy Northwest also conducted an in-situ tracer study using forward looking infrared (FLIR) technology focusing on temperature as a dilution tracer. The dilution factors are listed below.

Table 8 - Dilution Factors (DF)

Criteria	Acute	Chronic
Aquatic Life	9	93
Human Health, Carcinogen		93
Human Health, Non-carcinogen		93

EFSEC determined the impacts of pH, ammonia, metals, other toxics, and temperature as described below, using the dilution factors in the above table. The derivation of surface water quality-based limits also takes into account the variability of pollutant concentrations in both the effluent and the receiving water.

2. pH

EFSEC modeled the impact to receiving waters under critical conditions using technology-based limits for pH (6.5 – 9.0) and the *pH-mix-fresh* worksheet in EFSEC's PermitCalc spreadsheet. Appendix D includes the model results. Model calculations predict no violation of the pH criteria under critical conditions. Because the facility has demonstrated it can meet the previous permit limits of 6.5 to 9.0, the proposed permit includes the technology-based effluent limits for pH of 6.5 to 9.0.

3. Aquatic Life Toxic Pollutants

Federal regulations (40 CFR 122.44[27]) require EFSEC to place limits in NPDES permits on toxic chemicals in an effluent whenever there is a reasonable potential for those

[27] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122#122.44

chemicals to exceed the surface water quality criteria. EFSEC does not exempt facilities with technology-based effluent limits from meeting the surface water quality standards.

The following toxic pollutants are present in the discharge: ammonia and heavy metals. EFSEC conducted a reasonable potential analysis (See Appendix D) on these parameters to determine whether it would require effluent limits in this permit.

Ammonia's toxicity depends on that portion which is available in the unionized form. The amount of unionized ammonia depends on the temperature and pH in the receiving freshwater. To evaluate ammonia toxicity, EFSEC used the available receiving water information for Ecology's ambient station 36A070 and spreadsheet tools developed by Ecology.

Valid ambient background data were available for ammonia, chromium, copper, lead, nickel, silver, and zinc. EFSEC used all applicable data to evaluate reasonable potential for this discharge to cause a violation of water quality standards.

EFSEC determined that ammonia, aluminum, arsenic, chromium, copper, iron, lead, mercury, nickel, selenium, silver, and zinc pose no reasonable potential to cause or contribute to exceedances of the water quality criteria at the critical condition using procedures given in EPA, 1991 (Appendix D) and as described above. EFSEC's determination assumes that this facility meets the other effluent limits of this permit.

4. Temperature

The state temperature standards (WAC 173-201A, WAC 173-201A-200, WAC 173-201A-600, and WAC 173-201A-602) include multiple elements:

a. Annual summer maximum threshold criteria (June 15 to September 15)
b. Supplemental spawning and rearing season criteria (September 15 to June 15)
c. Incremental warming restrictions
d. Guidelines on preventing acute lethality and barriers to migration of salmonids

EFSEC evaluates each criterion independently to determine reasonable potential and derive permit limits.

a. Annual summer maximum and supplementary spawning/rearing criteria

Each water body has an annual maximum temperature criterion [WAC 173-201A-200(1)(c), and WAC 173-201A-602, Table 602]. These threshold criteria (e.g., 12, 16, 17.5, 20°C) protect specific categories of aquatic life by controlling the effect of human actions on summer temperatures.

Some waters have an additional threshold criterion to protect the spawning and incubation of salmonids (9°C for char and 13°C for salmon and trout) [WAC 173-201A-602, Table 602]. These criteria apply during specific date-windows.

The threshold criteria apply at the edge of the chronic mixing zone. Criteria for most fresh waters are expressed as the highest 7-Day average of daily maximum temperature (7-DADMax). The 7-DADMax temperature is the arithmetic average of seven

consecutive measures of daily maximum temperatures. Criteria for some fresh waters are expressed as the highest 1-Day annual maximum temperature (1-DMax).

b. Incremental warming criteria

The water quality standards limit the amount of warming human sources can cause under specific situations [WAC 173-201A-200(1)(c)(i)-(ii)]. The incremental warming criteria apply at the edge of the chronic mixing zone.

At locations and times when background temperatures are cooler than the assigned threshold criterion, point sources are permitted to warm the water by only a defined increment. These increments are permitted only to the extent doing so does not cause temperatures to exceed either the annual maximum or supplemental spawning criteria.

c. Guidelines to prevent acute lethality or barriers to migration of salmonids. These site-level considerations do not override the temperature criteria listed above.
   i. Instantaneous lethality to passing fish: The upper 99th percentile daily maximum effluent temperature must not exceed 33°C, unless a dilution analysis indicates ambient temperatures will not exceed 33°C two seconds after discharge.
   ii. General lethality and migration blockage: The temperature at the edge of a chronic mixing zone must not exceed either a 1DMax of 23°C or a 7DADMax of 22°C. When adjacent downstream temperatures are 3°C or more cooler, the 1DMax at the edge of the chronic mixing zone must not exceed 22°C.
   iii. Lethality to incubating fish: The temperature must not exceed 17.5°C at locations where eggs are incubating.

Temperature Limit

This discharge is regulated by the Total Maximum Daily Load (TMDL) for temperature in the Columbia and Lower Snake Rivers[28] waste load allocation (WLA) for the Columbia Generating Station. The WLA is 1.27E+09 kilocalories per day (kcal/day) of heat load, to be applied as a monthly average limit from June 1 through October 31. The proposed permit includes an effluent limit for temperature derived from the completed TMDL. The average monthly heat load is calculated from the average monthly temperature and flow rate as follows: Heat Load (kcal/day) = Flow (mgd) x Temperature (°C) x 3.78×10^6.

Reasonable Potential Analysis for annual summer maximum and incremental warming criteria

EFSEC calculated the reasonable potential for the discharge to exceed the annual summer maximum and the incremental warming criteria (See temperature calculations in Appendix D). The discharge is allowed to warm the water by a defined increment only when the background (ambient) temperature is cooler than the assigned threshold

[28] https://www.epa.gov/columbiariver/tmdl-temperature-columbia-and-lower-snake-rivers

criterion. EFSEC allows warming increments only when they do not cause temperatures to exceed either the annual maximum or supplemental spawning criteria.

The allowable warming increment, t, is the lesser of: $t = 28/(T_{ambient} + 7)$, or the numeric criterion minus the ambient temperature. For this discharge the allowable increment t is: 20°C - 19.5°C = 0.5°C.

The temperature at the edge of the chronic mixing zone is:

$T_{chronic} = T_{ambient} + (T_{effluent95} - T_{ambient})/DF)$

$T_{ambient}$ = 90th percentile annual 1-DMax background temperature

$T_{effluent95}$ = 95th percentile 1-DMax) effluent temperature

$T_{chronic} = 19.5 + (33.1 - 19.5)/93) = 19.6°C$

So the temperature increase from the discharge is 19.6-19.5 = 0.1°C.

The incremental increase for this discharge is within the allowable amount. Therefore, the proposed permit includes the temperature limit based on the TMDL WLA.

Instantaneous lethality to passing fish: Near-field dilution analysis demonstrates that the plume temperature is less than 33°C two seconds after discharge. EFSEC calculated the plume temperature two seconds after discharge using the equations shown below and data from the Energy Northwest Columbia Generating Station Effluent Mixing Study (June 2008) which used the CORMIX Hydrodynamic Mixing Zone Model (CORMIX1-Version 5.0). EFSEC reviewed the CORMIX1 Prediction File used to determine dilution factors for the proposed permit to determine a value for DF@2second. The file predicts the end of the near-field region at 1.25 seconds with a corresponding centerline dilution factor of 3.7. This value was used for DF@2seconds in the equation.

The results demonstrate there is no reasonable potential for instantaneous lethality to passing fish.

$T_{2sec} = T_{ambient90} + (T_{effluent99} - T_{ambient90})/(DF@2seconds)$.

Where:

T_{2sec} = plume temperature 2-seconds after discharge.

$T_{ambient90}$ = 90th percentile of annual maximum 1DMax background temperatures.

$T_{effluent99}$ = 99th percentile of maximum 1DMax effluent temperatures.

DF@2seconds = centerline dilution factor at 2 seconds plume travel during a 7Q10 period.

$T_{2sec} = 22 + (34.9-22)/(3.7) = 25.6°C$

III.G. Human health

Washington's water quality standards include numeric human health-based criteria for priority pollutants that EFSEC must consider when writing NPDES permits.

EFSEC determined the effluent may contain chemicals of concern for human health, based on the facility's status as an EPA major discharger, and data or information indicating the discharge contains regulated chemicals.

EFSEC evaluated the discharge's potential to violate the water quality standards as required by 40 CFR 122.44(d)[29] by following the procedures published in the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001)[30] and Ecology's Permit Writer's Manual[31] to make a reasonable potential determination. The evaluation showed that the discharge has no reasonable potential to cause a violation of water quality standards, and an effluent limit is not needed, for antimony, bis(2-ethylhexyl) phthalate, bromoform, copper, iron, mercury, nickel, selenium, and zinc.

III.H. Sediment quality

The aquatic sediment standards (chapter 173-204 WAC[32]) protect aquatic biota and human health. Under these standards EFSEC may require a facility to evaluate the potential for its discharge to cause a violation of sediment standards (WAC 173-204-400). You can obtain additional information about sediments at the Aquatic Lands Cleanup Unit website[33].

Through a review of the discharger characteristics and of the effluent characteristics, EFSEC determined that this discharge has no reasonable potential to violate the sediment management standards. The velocity of the Columbia River in the vicinity of the outfall inhibits sediment deposition. Visual inspection of the outfall during the evaluation conducted on September 17, 2018 confirms this finding.

III.I. Groundwater quality limits

The groundwater quality standards (chapter 173-200 WAC[34]) protect beneficial uses of groundwater. Permits issued by EFSEC must not allow violations of those standards (WAC 173-200-100).

The previous permit included groundwater monitoring for two outfalls where facility water was discharged to ground. These outfalls were discontinued when the facility built a large evaporation impoundment that is double-lined with leak detection. CGS no longer discharges wastewater to the ground. The outfalls that discharged to ground but no longer do so were removed from the permit.

The previous permit also required Energy Northwest to conduct a groundwater monitoring study to assess the effects of circulating cooling water system leakage. This study has been

[29] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122#122.44
[30] https://www3.epa.gov/npdes/pubs/owm0264.pdf
[31] https://apps.ecology.wa.gov/publications/summarypages/92109.html
[32] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-204
[33] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Sediment-cleanups
[34] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200

completed, reviewed by Ecology, Dept. of Health, and EFSEC, accepted, and finalized. The compliance schedule specified in the previous permit has been resolved.

After reviewing the completed study and an additional ten years of groundwater data provided by Energy Northwest, EFSEC has determined that this proposed permit will not contain any further groundwater monitoring requirements.

III.J. Whole effluent toxicity

The water quality standards for surface waters forbid discharge of effluent that has the potential to cause toxic effects in the receiving waters. Many toxic pollutants cannot be measured by commonly available detection methods. However, laboratory tests can measure toxicity directly by exposing living organisms to the wastewater and measuring their responses. These tests measure the aggregate toxicity of the whole effluent, so this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

- Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests find early indications of any potential lethal effect of the effluent on organisms in the receiving water.
- Chronic toxicity tests measure various sublethal toxic responses, such as reduced growth or reproduction. Chronic toxicity tests often involve either a complete life cycle test on an organism with an extremely short life cycle, or a partial life cycle test during a critical stage of a test organism's life. Some chronic toxicity tests also measure survival.

Laboratories accredited by Ecology for WET testing must use the proper WET testing protocols, fulfill the data requirements, and submit results in the correct reporting format according to the procedures in the most recent version of Ecology's Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria (Publication 95-80)[35]. EFSEC recommends that the regulated facility send a copy of the acute and chronic toxicity sections(s) of its NPDES permit to the laboratory.

All WET testing results conducted in order to monitor for compliance with an acute WET limit assigned in a previous permit met the acute toxicity performance standard defined in WAC 173-205-02036. This testing has continued to meet the standard after modifications to the dehalogenation system in 2019. The Permittee has not made any other changes to the facility which would trigger an additional effluent characterization pursuant to WAC 173-205-060. For these reasons, EFSEC has not included the acute WET limit or additional characterization in the proposed permit. Instead, the Permittee must conduct WET testing at the end of the permit term in order to verify that effluent toxicity has not increased.

WET testing conducted during effluent characterization showed no reasonable potential for effluent discharges to cause receiving water chronic toxicity. The proposed permit will not

[35] https://apps.ecology.wa.gov/publications/SummaryPages/9580.html
[36] https://app.leg.wa.gov/WAC/default.aspx?cite=173-205-020

include a chronic WET limit. The Permittee must retest the effluent before submitting an application for permit renewal.

- If this facility makes process or material changes which, in EFSEC's opinion, increase the potential for effluent toxicity, then EFSEC may (in a regulatory order, by permit modification, or in the permit renewal) require the facility to conduct additional effluent characterization
- If WET testing conducted for submittal with a permit application fails to meet the performance standards in WAC 173-205-020[37], EFSEC will assume that effluent toxicity has increased. Energy Northwest may demonstrate to EFSEC that effluent toxicity has not increased by performing additional WET testing after the process or material changes have been made.

III.K. Comparison of effluent limits with the previous permit as modified on March 19, 2019

Table 9 - Comparison of Previous and Proposed Effluent Limits – Outfall 001

Limit	Basis of Limit	Existing permit limit	Proposed permit limit
Flow - average monthly	Technology	5.6 MGD	5.6 MGD
Flow - maximum daily	Technology	9.4 MGD	9.4 MGD
Total Residual Halogen - maximum daily	Technology	0.1 mg/L	0.1 mg/L
Chromium (Total) - average monthly	Technology	8.2 µg/L	8.2 µg/L
Chromium (Total) - maximum daily	Technology	16.4 µg/L	16.4 µg/L
Zinc (Total) - average monthly	Technology	53 µg/L	53 µg/L
Zinc (Total) - maximum daily	Technology	107 µg/L	107 µg/L
Polychlorinated biphenyl compounds (PCBs)	Technology	No discharge	No discharge
The 126 priority pollutants (40 CFR 423 Appendix A) contained in chemicals added for cooling tower maintenance, except chromium and zinc	Technology	No detectable amount	No detectable amount
pH – Daily Minimum	Technology	6.5 s.u.	6.5 s.u.
pH – Daily Maximum	Technology	9.0 s.u.	9.0 s.u.
Heat Load - average monthly, June-October	WQ - TMDL	none	1.27E+09 kilocalories per day (kcal/day)

[37] https://app.leg.wa.gov/WAC/default.aspx?cite=173-205-020

IV. Monitoring Requirements

EFSEC requires monitoring, recording, and reporting (WAC 173-220-210[38] and 40 CFR 122.41[39]) to verify that the treatment process is functioning correctly and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, detection level (DL), and quantitation level (QL) on the discharge monitoring report or in the required report.

IV.A. Wastewater monitoring

The monitoring schedule is detailed in the proposed permit under Special Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, and significance of pollutants.

IV.B. Lab accreditation

EFSEC requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC[40], Accreditation of Environmental Laboratories, to prepare all monitoring data (with the exception of certain parameters). Ecology accredited the laboratory at this facility for the following non-potable water parameters:

Table 10 - Accredited Parameters

Category	Method Name	Analyte Name
General Chemistry	EPA 300.0_2.1_1993	Bromide
General Chemistry	EPA 300.0_2.1_1993	Chloride
General Chemistry	EPA 300.0_2.1_1993	Fluoride
General Chemistry	EPA 300.0_2.1_1993	Nitrate
General Chemistry	EPA 300.0_2.1_1993	Nitrate + Nitrite
General Chemistry	EPA 300.0_2.1_1993	Nitrite
General Chemistry	EPA 300.0_2.1_1993	Sulfate
General Chemistry	EPA 410.4_2_1993	Chemical Oxygen Demand (COD)
General Chemistry	SM 2130 B-2011	Turbidity
General Chemistry	SM 2320 B-2011	Alkalinity
General Chemistry	SM 2510 B-2011	Specific Conductance
General Chemistry	SM 2540 C-2011	Solids, Total Dissolved
General Chemistry	SM 2540 D-2011	Solids, Total Suspended
General Chemistry	SM 3500-Cr B-2011	Chromium, Hexavalent
General Chemistry	SM 4500-H+ B-2011	pH

[38] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-220-210
[39] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.41
[40] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-50

Table 10 – Accredited Parameters continued

Category	Method Name	Analyte Name
General Chemistry	SM 4500-NH3 D-2011	Ammonia
General Chemistry	SM 4500-O G-2011	Dissolved Oxygen
General Chemistry	SM 4500-P E-2011	Orthophosphate
General Chemistry	SM 4500-P E-2011	Phosphorus, Total
General Chemistry	SM 5210 B-2011	Biochemical Oxygen Demand (BOD)
General Chemistry	SM 5210 B-2011	Carbonaceous BOD (CBOD)
General Chemistry	SM 5310 B-2011	Total Organic Carbon
Metals	EPA 200.8_5.4_1994	Aluminum
Metals	EPA 200.8_5.4_1994	Antimony
Metals	EPA 200.8_5.4_1994	Arsenic
Metals	EPA 200.8_5.4_1994	Barium
Metals	EPA 200.8_5.4_1994	Beryllium
Metals	EPA 200.8_5.4_1994	Cadmium
Metals	EPA 200.8_5.4_1994	Calcium
Metals	EPA 200.8_5.4_1994	Chromium
Metals	EPA 200.8_5.4_1994	Cobalt
Metals	EPA 200.8_5.4_1994	Copper
Metals	EPA 200.8_5.4_1994	Iron
Metals	EPA 200.8_5.4_1994	Lead
Metals	EPA 200.8_5.4_1994	Magnesium
Metals	EPA 200.8_5.4_1994	Manganese
Metals	EPA 200.8_5.4_1994	Molybdenum
Metals	EPA 200.8_5.4_1994	Nickel
Metals	EPA 200.8_5.4_1994	Potassium
Metals	EPA 200.8_5.4_1994	Selenium
Metals	EPA 200.8_5.4_1994	Silver
Metals	EPA 200.8_5.4_1994	Sodium
Metals	EPA 200.8_5.4_1994	Thallium
Metals	EPA 200.8_5.4_1994	Tin
Metals	EPA 200.8_5.4_1994	Vanadium
Metals	EPA 200.8_5.4_1994	Zinc

IV.C. Effluent limits which are near detection or quantitation levels

The water quality-based effluent concentration limits for chromium are near the limits of current analytical methods to detect or accurately quantify. The method detection level (MDL) also known as detection level (DL) is the minimum concentration of a pollutant that a laboratory can measure and report with a 99 percent confidence that its concentration is

greater than zero (as determined by a specific laboratory method). The quantitation level (QL) is the level at which a laboratory can reliably report concentrations with a specified level of error. Estimated concentrations are the values between the DL and the QL. EFSEC requires the facility to report estimated concentrations. When reporting maximum daily effluent concentrations, EFSEC requires the facility to report "less than X" where X is the required detection level if the measured effluent concentration falls below the detection level.

V. Other Permit Conditions

V.A. Reporting and record keeping

EFSEC based Special Condition S3 on its authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-220-210[41]).

V.B. Non routine and unanticipated wastewater

Occasionally, this facility may generate wastewater which was not characterized in the permit application because it is not a routine discharge and was not anticipated at the time of application. These wastes typically consist of waters used to pressure-test storage tanks or fire water systems or of leaks from drinking water systems.

The permit authorizes the discharge of non-routine and unanticipated wastewater under certain conditions. The facility must characterize these waste waters for pollutants and examine the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and on any opportunities for reuse, EFSEC may:

- Authorize the facility to discharge the wastewater.
- Require the facility to treat the wastewater.
- Require the facility to reuse the wastewater.

V.C. Spill plan

This facility stores a quantity of chemicals on-site that have the potential to cause water pollution if accidentally released. EFSEC can require a facility to develop best management plans to prevent this accidental release [Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA)[42] and RCW 90.48.080[43]].

CGS developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the facility to update this plan if substantial changes are made onsite during the permit term and submit it to EFSEC.

V.D. Solid waste control plan

CGS could cause pollution of the waters of the state through inappropriate disposal of solid waste or through the release of leachate from solid waste.

[41] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-220-210
[42] https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system
[43] http://app.leg.wa.gov/RCW/default.aspx?cite=90.48.080

This proposed permit requires this facility to update the approved solid waste control plan if substantial changes are made onsite during the permit term. The facility must submit the updated plan to EFSEC for approval (RCW 90.48.080[44]). Refer to the Ecology guidance document, Developing a Solid Waste Control Plan[45].

V.E. Operation and maintenance manual

EFSEC requires Energy Northwest to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state and federal regulations [40 CFR 122.41(e)[46] and WAC 173-220-150 (1)(g)[47]]. The facility has prepared and submitted an operation and maintenance manual for the cooling water system, and an operation and maintenance manual for the evaporation ponds, as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150[48]). Implementation of the procedures in the operation and maintenance manual ensures the facility's compliance with the terms and limits in the permit. The proposed permit requires Energy Northwest to submit updates to each of these manuals.

V.F. Stormwater pollution prevention plan

In accordance with 40 CFR 122.44(k)[49] and 40 CFR 122.44 (s), the proposed permit includes requirements for the implementation and update of a SWPPP along with BMPs to minimize or prevent the discharge of pollutants to waters of the state. BMPs constitute Best Conventional Pollutant Control Technology (BCT) and Best Available Technology Economically Achievable (BAT) for stormwater discharges. EFSEC has determined that Energy Northwest must update the CGS SWPPP and continue to implement adequate BMPs in order to meet the requirements of "all known, available, and reasonable methods of prevention, control, and treatment" (AKART). A SWPPP requires a facility to implement actions necessary to manage stormwater to comply with the state's requirement under chapter 90.48 RCW[50] to protect the beneficial uses of waters of the state.

The SWPPP must identify potential sources of stormwater contamination from industrial activities and identify how it plans to manage those sources of contamination to prevent or minimize contamination of stormwater. Energy Northwest must continuously review and revise the SWPPP as necessary to assure that stormwater discharges do not degrade water quality. It must retain the SWPPP on-site or within reasonable access to the site and available for review by EFSEC.

1. Best Management Practices (BMPs)

BMPs are the actions identified in the SWPPP to manage, prevent contamination of, and treat stormwater. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to

[44] http://app.leg.wa.gov/RCW/default.aspx?cite=90.48.080
[45] https://apps.ecology.wa.gov/publications/documents/0710024.pdf
[46] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.41
[47] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-220-150
[48] https://app.leg.wa.gov/wac/default.aspx?cite=173-240-150
[49] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/subpart-C/section-122.44
[50] https://app.leg.wa.gov/RCW/default.aspx?cite=90.48

prevent or reduce the pollution of waters of the state. BMPs also include treatment systems, operating procedures, and practices used to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage. Insert name must ensure that its SWPPP includes the operational and structural source control BMPs listed as "applicable" in Ecology's stormwater management manuals. Many of these "applicable" BMPs are sector-specific or activity-specific, and are not required at facilities engaged in other industrial sectors or activities.

2. Ecology-Approved Stormwater Management Manuals

Consistent with RCW 90.48.555 (5) and (6), the proposed permit requires the facility to implement BMPs contained in the Stormwater Management Manual for Eastern Washington (2019)[51], or practices that are demonstrably equivalent to practices contained in stormwater technical manuals approved by Ecology. This should ensure that BMPs will prevent violations of state water quality standards, and satisfy the state AKART requirements and the federal technology-based treatment requirements under 40 CFR part 125.352. The SWPPP must document that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable Stormwater Management Manuals, including: The technical basis for the selection for all stormwater BMPs (scientific, technical studies, and/or modeling) which support the performance claims for the BMPs selected.

3. Operational Source Control BMPs

Operational source control BMPs include a schedule of activities, prohibition of practices, maintenance procedures, employee training, good housekeeping, and other managerial practices to prevent or reduce the pollution of waters of the state. These activities do not require construction of pollution control devices but are very important components of a successful SWPPP. Employee training, for instance, is critical to achieving timely and consistent spill response. Pollution prevention is likely to fail if the employees do not understand the importance and objectives of BMPs. Prohibitions might include eliminating outdoor repair work on equipment and certainly would include the elimination of intentional draining of crankcase oil on the ground. Good housekeeping and maintenance schedules help prevent incidents that could result in the release of pollutants. Operational BMPs represent a cost-effective way to control pollutants and protect the environment. The SWPPP must identify all the operational BMPs and how and where they are implemented. For example, the SWPPP must identify what training will consist of, when training will take place, and who is responsible to assure that employee training happens.

4. Structural Source Control BMPs

Structural source control BMPs include physical, structural, or mechanical devices or facilities intended to prevent pollutants from entering stormwater. Examples of source control BMPs include erosion control practices, maintenance of stormwater facilities

[51] https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Stormwater-manuals
[52] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-125#125.3

(e.g., cleaning out sediment traps), construction of roofs over storage and working areas, and direction of equipment wash water and similar discharges to the sanitary sewer or a dead end sump. Structural source control BMPs likely include a capital investment but are cost effective compared to cleaning up pollutants after they have entered stormwater.

5. Treatment BMPs

Operational and structural source control BMPs are designed to prevent pollutants from entering stormwater. However, even with an aggressive and successful program, stormwater may still require treatment to achieve compliance with water quality standards. Treatment BMPs remove pollutants from stormwater. Examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

6. Volume/Flow Control BMPs

EFSEC recognizes the need to include specific BMP requirements for stormwater runoff quantity control to protect beneficial water uses, including fish habitat. New facilities and existing facilities undergoing redevelopment must implement the requirements for peak runoff rate and volume control identified in the Eastern Washington SWMM (2019). Controlling the rate and volume of stormwater discharge maintains the health of the watershed. Existing facilities should identify control measures that they can implement over time to reduce the impact of uncontrolled release of stormwater.

V.G. Cooling water intake requirements

The Clean Water Act, Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impact. The Columbia Generating Station has a cooling water intake with a maximum design flow of 36 MGD. Over 90% of the flow is used exclusively for cooling. Facilities with design intake flows greater than two million gallons per day, of which greater than 25 percent of the water withdrawn is used exclusively for cooling purposes, must comply with specific application requirements and BTA standards in 40 CFR Part 125 Subpart J[53].

Energy Northwest submitted with their permit application the information required by 40 CFR 122.21(r).

Impingement BTA Determination: The owner or operator of an existing facility must comply with one of the alternatives listed in 40 CFR 125.94(c). CGS complies with this requirement by operating a closed-cycle recirculating system. CGS must monitor the actual intake flows at a minimum frequency of daily. The monitoring must be representative of normal operating conditions, and must include measuring cooling water withdrawals, make-up water, and blow down volume.

Entrainment BTA Determination: EPA has not promulgated specific compliance options for the entrainment standard. EFSEC must establish BTA standards for entrainment on a site-specific basis. 40 CFR 125.98(f) includes various factors for consideration in the entrainment determination. The previous permit required Energy Northwest to conduct an entrainment

[53] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-125/subpart-J

characterization study. EFSEC received an interim report February 7, 2019 and the final report on February 26, 2020. The report was prepared by Anchor QEA and underwent third-party external review by experts in biological monitoring and Columbia River aquatic ecology in accordance with the U.S. Environmental Protection Agency Peer Review Guidelines. Very few fish were entrained over the entire two-year study period. A total of four fish were entrained in 754 hours of monitoring, suggesting the Columbia Generating Station's impact to the fish populations in the Hanford Reach of the Columbia River are minute. Based on the information submitted with the permit application and the results of the characterization study, EFSEC's determination is that the existing closed-cycle recirculating system meets the BTA standard for entrainment and additional control measures are not necessary.

Operation and Maintenance: The permit includes general operation and maintenance requirements as well as reporting requirements to ensure that the cooling water intake structure continues to be operated as designed. Energy Northwest last updated the CGS NPDES Operation and Maintenance Plan on February 3, 2022. Visual impingement monitoring of the TMU river intake structure is conducted on a semiannual basis when the intake structure is operational and the inspection can be conducted safely. Underwater video equipment is deployed from a boat to collect photographic verification. Due to the remote offshore location of the intake structure, weekly visual monitoring is not feasible. The cooling water intake structure is also visually inspected every three years during low water conditions to evaluate the physical condition of the structure.

Energy Northwest must submit an annual certification and report to EFSEC that describes any modifications that affect cooling water withdrawals or operation of the cooling water intake structures. Any significant impingement or entrainment must be reported to EFSEC within 24 hours.

V.H. General conditions

EFSEC bases the standardized General Conditions on state and federal law and regulations. They are included in all individual industrial NPDES permits issued by EFSEC.

VI. Permit Issuance Procedures

VI.A. Permit modifications

EFSEC may modify this permit to impose numeric limits, if necessary to comply with water quality standards for surface waters, with sediment quality standards, or with water quality standards for groundwaters, after obtaining new information from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

EFSEC may also modify this permit to comply with new or amended state or federal regulations.

VI.B. Proposed permit Issuance

This proposed permit includes all statutory requirements for EFSEC to authorize a wastewater discharge. The permit includes limits and conditions to protect human health and

aquatic life, and the beneficial uses of waters of the state of Washington. EFSEC proposes to issue this permit for a term of five years.

VII. References for Text and Appendices

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. ***Technical Support Document for Water Quality-based Toxics Control***. EPA/505/2-90-001.

1988. ***Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling***. USEPA Office of Water, Washington, D.C.

1985. ***Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water***. EPA/600/6-85/002a.

1983. ***Water Quality Standards Handbook***. USEPA Office of Water, Washington, D.C. Tsivoglou, E.C., and J.R. Wallace.

1972. ***Characterization of Stream Reaeration Capacity***. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

1979. ***In-stream Deoxygenation Rate Prediction***. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology

July 2018. ***Permit Writer's Manual***. Publication 92-109[54]

September 2011. ***Water Quality Program Guidance Manual – Supplemental Guidance on Implementing Tier II Antidegradation***. Publication 11-10-073[55]

October 2010 (revised). ***Water Quality Program Guidance Manual – Procedures to Implement the State's Temperature Standards through NPDES Permits***. Publication 06-10-100[56]

February 2007. ***Focus Sheet on Solid Waste Control Plan, Developing a Solid Waste Control Plan for Industrial Wastewater Discharge Permittees***, Publication 07-10-024[57].

Laws and Regulations[58]

Permit and Wastewater Related Information[59]

[54] https://apps.ecology.wa.gov/publications/summarypages/92109.html
[55] https://apps.ecology.wa.gov/publications/summarypages/1110073.html
[56] https://apps.ecology.wa.gov/publications/summarypages/0610100.html
[57] https://apps.ecology.wa.gov/publications/SummaryPages/0710024.html
[58] http://leg.wa.gov/LawsAndAgencyRules/Pages/default.aspx
[59] https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance

Appendix A – Public Involvement Information

EFSEC proposes to reissue a permit to Energy Northwest Columbia Generating Station. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and EFSEC's reasons for requiring permit conditions.

EFSEC will place a Public Notice of Draft on date in name of publication to inform the public and to invite comment on the proposed draft National Pollutant Discharge Elimination System permit and fact sheet.

The notice:

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed NPDES permit.
- Explains the next step(s) in the permitting process.

[Attach printed copy of the Public Notice mail-out]

Frequently Asked Questions about Effective Public Commenting[60]

You may obtain further information from EFSEC by telephone, 360-664-1345, or by writing to the address listed below.

Energy Facility Site Evaluation Council
PO Box 43172
Olympia, WA 98504-3172

The primary author of this permit and fact sheet is Laura Fricke, PE, Department of Ecology.

[60] https://apps.ecology.wa.gov/publications/SummaryPages/0307023.html

Appendix B – Your Right to Appeal

You have a right to appeal this permit. Pursuant to WAC 463-76-063(1), a decision to issue this permit is subject to judicial review pursuant to the Administrative Procedure Act, Chapter 34.05 RCW.

Appendix C – Glossary

1-DMax or 1-day maximum temperature – The highest water temperature reached on any given day. This measure can be obtained using calibrated maximum/minimum thermometers or continuous monitoring probes having sampling intervals of thirty minutes or less.

7-DADMax or 7-day average of the daily maximum temperatures – The arithmetic average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

Acute toxicity – The lethal effect of a compound on an organism that occurs in a short time period, usually 48 to 96 hours.

AKART – The acronym for "all known, available, and reasonable methods of prevention, control and treatment." AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010[61] and RCW 90.48.520[62], WAC 173-200-030(2)(c)(ii)[63], and WAC 173-216-110(1)(a).

Alternate point of compliance – An alternative location in the groundwater from the point of compliance where compliance with the groundwater standards is measured. It may be established in the groundwater at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An "early warning value" must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2)[64].

Ambient water quality – The existing environmental condition of the water in a receiving water body.

Ammonia – Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Annual average design flow (AADF) – average of the daily flow volumes anticipated to occur over a calendar year.

Average monthly (intermittent) discharge limit – The average of the measured values obtained over a calendar months' time taking into account zero discharge days.

[61] http://app.leg.wa.gov/RCW/default.aspx?cite=90.48.010
[62] http://app.leg.wa.gov/RCW/default.aspx?cite=90.48.520
[63] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200-030
[64] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200-060

Average monthly discharge limit – The average of the measured values obtained over a calendar months' time.

Background water quality – The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of groundwater at a particular point in time upgradient of an activity that has not been affected by that activity, [WAC 173-200-020(3)[65]]. Background water quality for any parameter is statistically defined as the 95% upper tolerance interval with a 95% confidence based on at least eight hydraulically upgradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

Best management practices (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5 – Determining the five-day Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in receiving waters after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD_5 is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass – The intentional diversion of waste streams from any portion of a treatment facility.

Categorical pretreatment standards – National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties, which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Chlorine – A chemical used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic toxicity – The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean water act (CWA) – The federal Water Pollution Control Act enacted by Public Law 92 500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

[65] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200-020

Compliance inspection-without sampling – A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance inspection-with sampling – A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations. In addition it includes as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. EFSEC may conduct additional sampling.

Composite sample – A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction activity – Clearing, grading, excavation, and any other activity, which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous monitoring – Uninterrupted, unless otherwise noted in the permit.

Critical condition – The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Date of receipt – This is defined in RCW 43.21B.001(2)[66] as five business days after the date of mailing; or the date of actual receipt, when the actual receipt date can be proven by a preponderance of the evidence. The recipient's sworn affidavit or declaration indicating the date of receipt, which is unchallenged by the agency, constitutes sufficient evidence of actual receipt. The date of actual receipt, however, may not exceed forty-five days from the date of mailing.

Detection level – or method detection limit means the minimum concentration of an analyte (substance) that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results as determined by the procedure given in 40 CFR part 136, Appendix B[67].

Dilution factor (DF) – A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent

[66] http://app.leg.wa.gov/RCW/default.aspx?cite=43.21B.001
[67] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136/appendix-Appendix%20B%20to%20Part%20136

fraction, for example, a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Distribution uniformity – The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Early warning value – The concentration of a pollutant set in accordance with WAC 173-200-070[68] that is a percentage of an enforcement limit. It may be established in the effluent, groundwater, surface water, the vadose zone or within the treatment process. This value acts as a trigger to detect and respond to increasing contaminant concentrations prior to the degradation of a beneficial use.

Enforcement limit – The concentration assigned to a contaminant in the groundwater at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)[69]]. This limit assures that a groundwater criterion will not be exceeded and that background water quality will be protected.

Engineering report – A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report must contain the appropriate information required in WAC 173-240-060[70] or WAC 173-240-130[71].

Enterococci – A subgroup of fecal streptococci that includes *S. faecalis*, *S. faecium*, *S. gallinarum*, and *S. avium*. The enterococci are differentiated from other streptococci by their ability to grow in 6.5% sodium chloride, at pH 9.6, and at 10°C and 45°C.

E. coli – A bacterium in the family Enterobacteriaceae named Escherichia coli and is a common inhabitant of the intestinal tract of warm-blooded animals, and its presence in water samples is an indication of fecal pollution and the possible presence of enteric pathogens.

Fecal coliform bacteria – Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab sample – A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Groundwater – Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

[68] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200-070
[69] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200-020
[70] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-240-060
[71] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-240-130

Industrial user – A discharger of wastewater to the sanitary sewer that is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial wastewater – Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities.

Interference – A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local limits – Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Major facility – A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum daily discharge limit – The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Maximum day design flow (MDDF) – The largest volume of flow anticipated to occur during a one-day period, expressed as a daily average.

Maximum month design flow (MMDF) – The largest volume of flow anticipated to occur during a continuous 30-day period, expressed as a daily average.

Maximum week design flow (MWDF) – The largest volume of flow anticipated to occur during a continuous 7-day period, expressed as a daily average.

Method detection limit (MDL) – See Detection level.

Minor facility -- A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing zone – An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The permit specifies the area of the authorized mixing zone that EFSEC defines following procedures outlined in state regulations (chapter 173-201A WAC[72]).

National pollutant discharge elimination system (NPDES) – Section 402 of the Clean Water Act[73], the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State are joint NPDES/State permits issued under both state and federal laws.

pH – The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral and large variations above or below this value are considered harmful to most aquatic life.

Pass-through – A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

Peak hour design flow (PHDF) – The largest volume of flow anticipated to occur during a one-hour period, expressed as a daily or hourly average.

Peak instantaneous design flow (PIDF) – The maximum anticipated instantaneous flow.

Point of compliance – The location in the groundwater where the enforcement limit must not be exceeded and a facility must comply with the Ground Water Quality Standards. EFSEC determines this limit on a site-specific basis. EFSEC locates the point of compliance in the groundwater as near and directly downgradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless it approves an alternative point of compliance.

Potential significant industrial user (PSIU) – A potential significant industrial user is defined as an Industrial User that does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

[72] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A
[73] https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system

- Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

EFSEC may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation level (QL) – also known as Minimum level (ML) – The term ‘‘minimum level’’ refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (DL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the DL in a method, or the DL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: ‘‘quantitation limit,’’ ‘‘reporting limit,’’ and ‘‘minimum level’’.

Reasonable potential – A reasonable potential to cause or contribute to a water quality violation, or loss of sensitive and/or important habitat.

Responsible corporate officer – A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22[74]).

Sample Maximum – No sample may exceed this value.

Significant industrial user (SIU) –

- All industrial users subject to Categorical Pretreatment Standards under 40 CFR Chapter I, Subchapter N[75] and 40 CFR 403.6[76] and;
- Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

[74] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-121#se40.24.121_122
[75] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N
[76] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N/part-403

Upon finding that the industrial user meeting the criteria in the second paragraph has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug discharge – Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate that may cause interference or pass through with the POTW or in any way violate the permit conditions or the POTW's regulations and local limits.

Soil scientist – An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5, 3, or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

Solid waste – All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

Soluble BOD_5 – Determining the soluble fraction of Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of soluble organic material present in an effluent that is utilized by bacteria. Although the soluble BOD_5 test is not specifically described in Standard Methods, filtering the raw sample through at least a 1.2 um filter prior to running the standard BOD_5 test is sufficient to remove the particulate organic fraction.

State waters – Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater – That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based effluent limit – A permit limit based on the ability of a treatment method to reduce the pollutant.

Total coliform bacteria – A microbiological test, which detects and enumerates the total coliform group of bacteria in water samples.

Total dissolved solids – That portion of total solids in water or wastewater that passes through a specific filter.

Total maximum daily load (TMDL) – A determination of the amount of pollutant that a water body can receive and still meet water quality standards.

Total suspended solids (TSS) – Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset – An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water quality-based effluent limit – A limit imposed on the concentration of an effluent parameter to prevent the concentration of that parameter from exceeding its water quality criterion after discharge into receiving waters.

Appendix D — Technical Calculations
Un-ionized Ammonia Criteria Calculation:

The table below is a summary of the spreadsheet used by EFSEC, which contains the formulas modified by EPA that were adopted in the 1995 revision of the state water quality standards. Total ammonia, not unionized ammonia, is used in the reasonable potential calculation. Criteria are based on either total or unionized ammonia, depending on salmonid presence, but permittees measure total ammonia. The spreadsheet calculates the concentration of total ammonia in the effluent (as measured by permittee) that will result in the criteria concentration in the receiving water.

Table 11 - Ammonia Criteria Calculation

Freshwater Un-ionized Ammonia Criteria Calculation
Based on Chapter 173-201A WAC, amended November 20, 2006

INPUT	
1. Receiving Water Temperature (deg C):	19.5
2. Receiving Water pH:	8.4
3. Is salmonid habitat an existing or designated use?	Yes
4. Are non-salmonid early life stages present or absent?	Present
OUTPUT	
Using mixed temp and pH at mixing zone boundaries?	no
Ratio	13.500
FT	1.400
FPH	1.000
pKa	9.418
Unionized Fraction	0.087
Unionized ammonia NH3 criteria (mg/L as NH_3)	
Acute:	0.276
Chronic:	0.042
RESULTS	
Total ammonia nitrogen criteria (mg/L as N):	
Acute:	2.593
Chronic:	0.398

Reasonable Potential Analysis:

EFSEC uses spreadsheet tools to determine reasonable potential (to cause or contribute to violations of the aquatic life and human health water quality numeric standards) and to calculate effluent limits. The process and formulas for determining reasonable potential and effluent limits in these spreadsheets come from the Technical Support Document for Water Quality-based Toxics Control, (EPA 505/2-90-001)[77] (TSD). The adjustment for autocorrelation is from EPA (1996a), and EPA (1996b). The tables below show a summary of these calculations.

Table 12 - Aquatic Life Reasonable Potential Part 1

Pollutant, CAS No. & NPDES Application Ref. No.			AMMONIA, Criteria as Total NH3	ALUMINUM, total recoverable, pH 6.5-9.0 7429905	ARSENIC (dissolved) 7440382 2M	CHROMIUM(TRI) -16065831 5M Hardness dependent	COPPER - 744058 6M Hardness dependent	IRON 7439896	LEAD - 7439921 7M Dependent on hardness	MERCURY 7439976 8M
Effluent Data	# of Samples (n)		37	3	37	97	97	37	37	7
	Coeff of Variation (Cv)		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)		250	180	9.5	2.8	20	1300	3.5	0.004
	Calculated 50th percentile Effluent Conc. (when n>10)						13	1000		
Receiving Water Data	90th Percentile Conc., ug/L		41	0	0	0.6	1.2	0	0.075	0
	Geo Mean, ug/L						0.7	0		0
Water Quality Criteria	Aquatic Life Criteria, ug/L	Acute	2,593	750	360	385.6	11.339	-	40.282	2.1
		Chronic	398	87	190	125.09	7.8553	1000	1.5697	0.012
	WQ Criteria for Protection of Human Health, ug/L		-	-	-	-	1300	300	-	0.14
	Metal Criteria Translator, decimal	Acute	-	-	1	0.316	0.996	-	0.466	0.85
		Chronic	-	-	1	0.86	0.996	-	0.466	-
	Carcinogen?		N	N	Y	N	N	N	N	N

Aquatic Life Reasonable Potential

Effluent percentile value			0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
s	$s^2=\ln(CV^2+1)$		0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555
Pn	$Pn=(1-\text{confidence level})^{1/n}$		0.922	0.368	0.922	0.970	0.970	0.922	0.922	0.652
Multiplier			1.00	3.00	1.00	1.00	1.00	1.00	1.00	2.01
Max concentration (ug/L) at edge of…		Acute	64	59.991	1.056	0.632	3.280	144.444	0.248	0.001
		Chronic	43	5.806	0.102	0.619	1.401	13.978	0.092	0.000
Reasonable Potential? Limit Required?			**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

[77] https://www3.epa.gov/npdes/pubs/owm0264.pdf

Table 13 - Aquatic Life Reasonable Potential Part 2

Pollutant, CAS No. & NPDES Application Ref. No.			NICKEL - 7440020 9M - Dependent on hardness	SELENIUM 7782492 10M	SILVER - 7740224 11M dependent on hardness.	ZINC- 7440666 13M hardness dependent
Effluent Data	# of Samples (n)		37	37	37	97
	Coeff of Variation (Cv)		0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)		12	7.4	0.24	38
	Calculated 50th percentile Effluent Conc. (when n>10)		6.9	5		19
Receiving Water Data	90th Percentile Conc., ug/L		1.1	0	0	4.5
	Geo Mean, ug/L		0.61	0	0	2.6
Water Quality Criteria	Aquatic Life Criteria, ug/L	Acute	983.12	20	1.6445	79.449
		Chronic	109.18	5	-	72.549
	WQ Criteria for Protection of Human Health, ug/L		150	120	-	2300
	Metal Criteria Translator, decimal	Acute	0.998	-	0.85	0.996
		Chronic	0.997	-	-	0.996
	Carcinogen?		N	N	N	N

Aquatic Life Reasonable Potential

Effluent percentile value			0.950	0.950	0.950	0.950
s	$s^2=\ln(CV^2+1)$		0.555	0.555	0.555	0.555
Pn	$Pn=(1-\text{confidence level})^{1/n}$		0.922	0.922	0.922	0.970
Multiplier			1.00	1.00	1.00	1.00
Max concentration (ug/L) at edge of…		Acute	2.308	0.822	0.023	8.205
		Chronic	1.217	0.080	0.003	4.859
Reasonable Potential? Limit Required?			**NO**	**NO**	**NO**	**NO**

Table 14 - Human Health Reasonable Potential

Pollutant, CAS No. & NPDES Application Ref. No.			ANTIMONY (INORGANIC) 7440360 1M	BIS(2-ETHYLHEXYL) PHTHALATE 117817 13B	BROMOFORM 75252 5V	COPPER - 744058 6M Hardness dependent	IRON 7439896	MERCURY 7439976 8M	NICKEL - 7440020 9M - Dependent on hardness	SELENIUM 7782492 10M	ZINC- 7440666 13M hardness dependent
Effluent Data	# of Samples (n)		7	4	7	97	37	7	37	37	97
	Coeff of Variation (Cv)		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)		1.6	2.16	0.63	20	1300	0.004	12	7.4	38
	Calculated 50th percentile Effluent Conc. (when n>10)					13	1000		6.9	5	19
Receiving Water Data	90th Percentile Conc., ug/L					1.2	0	0	1.1	0	4.5
	Geo Mean, ug/L		0	0	0	0.7	0	0	0.61	0	2.6
Water Quality Criteria	Aquatic Life Criteria, ug/L	Acute	-	-	-	11.339	-	2.1	983.12	20	79.449
		Chronic	-	-	-	7.8553	1000	0.012	109.18	5	72.549
	WQ Criteria for Protection of Human Health, ug/L		12	0.23	5.8	1300	300	0.14	150	120	2300
	Metal Criteria Translator, decimal	Acute	-	-	-	0.996	-	0.85	0.998	-	0.996
		Chronic	-	-	-	0.996	-	-	0.997	-	0.996
	Carcinogen?		N	Y	Y	N	N	N	N	N	N
Human Health Reasonable Potential											
s	$s^2=\ln(CV^2+1)$		0.5545	0.5545	0.5545	0.5545	0.5545	0.5545	0.5545	0.5545	0.5545
Pn	Pn=(1-confidence level)1/n		0.652	0.473	0.652	0.970	0.922	0.652	0.922	0.922	0.970
Multiplier			0.8054	1.0385	0.8054	0.3536	0.455	0.8054	0.455	0.455	0.3536
Dilution Factor			93	93	93	93	93	93	93	93	93
Max Conc. at edge of Chronic Zone, ug/L			0.0139	0.0241	5.5E-03	0.8323	10.753	3E-05	0.6776	0.0538	2.7763
Reasonable Potential? Limit Required?			**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

pH Analysis:

The calculation of pH of a mixture of two flows is based on the procedure in EPA's DESCON program (EPA, 1988. *Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling*. EPA Office of Water, Washington DC). The major form of alkalinity is assumed to be carbonate alkalinity. Alkalinity and total inorganic carbon are assumed to be conservative.

Table 15 - pH Mixing Calculation

Calculation of pH of a Mixture of Two Flows

Based on the procedure in EPA's DESCON program (EPA, 1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington D.C.)

INPUT	
	@ Chronic Boundary
1. Dilution Factor at Mixing Zone Boundary	93.0
2. Ambient/Upstream/Background Conditions	
Temperature (deg C):	19.50
pH:	8.40
Alkalinity (mg CaCO3/L):	60.40
3. Effluent Characteristics	
Temperature (deg C):	33.10
pH:	6.50
Alkalinity (mg CaCO3/L):	130.00
4. Aquatic Life Use Designation	Other species (salmonid/redband trout/warmwater species)
OUTPUT	
1. Ionization Constants	
Upstream/Background pKa:	6.39
Effluent pKa:	6.31
2. Ionization Fractions	
Upstream/Background Ionization Fraction:	0.99
Effluent Ionization Fraction:	0.61
3. Total Inorganic Carbon	
Upstream/Background Total Inorganic Carbon (mg CaCO3/L):	61
Effluent Total Inorganic Carbon (mg CaCO3/L):	214
4. Condtions at Mixing Zone Boundary	
Temperature (deg C):	19.65
Alkalinity (mg CaCO3/L):	61.15
Total Inorganic Carbon (mg CaCO3/L):	62.63
pKa:	6.38
5. Allowable pH change	0.50
RESULTS	
pH at Mixing Zone Boundary:	**8.00**
pH change at Mixing Zone Boundary:	0.40
Is permit limit needed?	NO

Appendix E — Response to Comments

EFSEC accepted public comments during the period from February 16, 2023 through March 18, 2023. EFSEC received comments from Energy Northwest and from the Washington State Department of Natural Resources (DNR).

Energy Northwest, Comment 1:

Page 8, condition S2.A, Table 4 contains an annual monitoring requirement for oil and grease that was not present in the original draft NPDES permit reviewed by EN. EN would like to know the basis for this new monitoring requirement.

> *Response: This is a minimal monitoring requirement to provide data for the next permit application.*

Energy Northwest, Comment 2:

Page 19, condition S8.B.1 states: "A list of all oil and petroleum products and other materials used and/or stored on-site…" The previous permit prefaced the quantities of oil, petroleum products, and other materials as "bulk". This condition, as written, would apply to all materials on-site, even if they don't have the potential to enter the environment (e.g., lab reagents used exclusively indoors). EN recommends modifying the language to read: "a list of all bulk oil and petroleum products and other materials…". A qualification based on bulk amounts of hazardous material is more practical and manageable. EN's current Spill Prevention, Control, and Counter-Measure Plan focuses on bulk chemicals and their potential to spill to the environment.

> *Response: This request is consistent with the intent of the permit condition. The word "bulk" has been added to the permit condition.*

Energy Northwest, Comment 3:

Page 24, condition S13.B.4 requires visual semiannual intake structure impingement monitoring. These inspections have not been successful in the spring due to high flows in the Columbia River rendering the activity unsafe. EN recommends modifying the requirement to an annual basis instead of semiannual.

> *Response: EFSEC acknowledges that it has not been feasible for EN to conduct semiannual visual monitoring of the offshore intake structure. The permit language has been changed to require this monitoring "at a minimum of once per year." EFSEC expects EN to continue additional informal monitoring when feasible as described in the O&M Manual.*

Energy Northwest, Comment 4:

There are many instances of hyperlinks to the Code of Federal Regulations, Washington Administrative Code, and other guidance documents. EN is concerned that any changes to the hyperlinked documents, especially guidance documents, could become in effect a change to the NPDES permit without it going through normal permit modification reviews. EN recommends removing the hyperlinks and citing the current (at time of writing) revisions to the regulations

and guidance documents or otherwise clarifying the effective dates for any referenced regulations and guidance.

Response: Hyperlinks were provided as a convenience for the reader; the likelihood of any substantial effect of revisions to the source documents on the meaning of the permit conditions is very low. However, to address EN's concerns the hyperlinks to regulations and guidance documents have been removed from the permit document. A reference list has been added that includes the statutes, regulations, manuals, and guidance documents included in the permit.

Washington State Department of Natural Resources (DNR)

DNR submitted a letter stating that Energy Northwest must obtain authorization from DNR for operations on state-owned aquatic lands.

Response: This comment does not affect any specific NPDES permit conditions. It is the responsibility of Energy Northwest to follow up as necessary with DNR regarding their regulatory authority.

EFSEC Monthly Council Meeting Facility Update

Facility Name: Columbia Solar Projects (Penstemon, Camas and Urtica)
Operator: Tuusso Energy, LLC
Report Date: May 10, 2023
Reporting Period: 30 days ending May 7, 2023
Site Contact: Thomas Cushing
Facility SCA Status: Construction

Construction Status

- Penstemon
  - Currently operational
  - Total Generation during the month of April was 1.046 Gigawatt hours

- Camas
  - Currently operational
  - Total Generation during the month of April was 1.024 Gigawatt hours

- Urtica
  - Currently operational
  - Total Generation during the month of April was 1.05 Gigawatt hours

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Desert Claim Wind Power Project

May 2023 project update

[Place holder]

Horse Heaven Wind Project

May 2023 project update

[Place holder]

Goose Prairie Solar Project

May 2023 project update

[Place holder]

Badger Mountain Solar Energy Project

May 2023 project update

[Place holder]

High Top and Ostrea Solar Project

May 2023 project update

[Place holder]

Wautoma Solar

May 2023 project update

[Place holder]

Hop Hill Solar Project

May 2023 project update

[Place holder]

Carriger Solar

May 2023 project update

[Place holder]