



PUGET SOUND ENERGY

The Energy To Do Great Things

RECEIVED

March 17, 2020

MAR 23 2020

Christos Christoforou
Northwest Clean Air Agency
1600 S. Second Street
Mt. Vernon, WA 98273-5202

NORTHWEST
CLEAN AIR AGENCY

Subject: PSE - Sumas Generating Station
Air Operating Permit/Title V Permit No. 021R1
Renewal Application

Dear Mr. Christoforou:

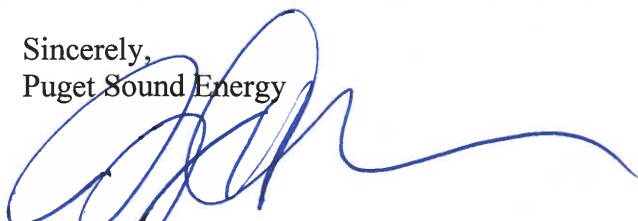
Enclosed, please find an Air Operating Permit (AOP)/Title V Permit renewal application for Puget Sound Energy's (PSE) Sumas Generating Station. The current Sumas AOP No. 021R1 was issued by NWCAA March 22, 2016. This submittal includes Renewal Application Forms, 2018 Annual Compliance Certification, 2017 and 2018 Annual Emission Inventory, a Site Plan, and a Process Flow Diagram for the facility.

Also, as part of this renewal application, Puget Sound Energy is proposing a few minor changes to the AOP and associated Order of Approval to Construct (OAC) 304g. These include:

- In OAC condition 2, specifying emission monitors shall be operated in accordance with 40 CFR Part 60 App B Subpart GG
- In OAC condition 4, specifying a timeframe of 11-13 month window to complete RATA testing
- In OAC condition 4, providing an option to use alternative test methods available.
- In AOP term 5.6, remove the requirement to record the ratio of steam to fuel.
- In AOP Permit Information, replace Responsible Corporate Official Michael Shores with Ronald J. Roberts, Puget Sound Energy, Director – Generation & Natural Gas Resources, 10885 NE 4th St, Bellevue, WA 98004, 425-456-2442

If you have any questions or concerns regarding this submittal, please contact me at (425) 457-5835.

Sincerely,
Puget Sound Energy


Joey M. Henderson
Supervisor, Environmental Programs

Traci _____ Michele _____ Scanned _____
Christos _____ Crystal _____ Dan _____
Jason _____ Lyn _____ Robyn _____
Mark _____ Agata _____ Toby _____
Other: _____
Rtn to: _____

ENC: Facility Monthly Report, Excess Emissions Reports, CEMS Downtime Reports, and
Summary Reports
cc: PSE File – SMS Compliance/AOP Renewal
SMS – Steve Nims

Title V Operating Permit Renewal Application Forms



Air Operating Permit Application

Form 1: General Information and Certification

1. Company Name: Puget Sound Energy
2. Plant or Facility Name: Sumas Generating Station
3. Existing Air Operating Permit Number: #021R1
4. Unified Business Identification Number (UBI#): 179010055
5. Facility Address: 1340 Thompson Lane, Sumas, WA 98295
6. County: Whatcom
7. Mailing Address: (if different): Same as facility address above
8. Owner: Puget Sound Energy
9. Parent Company: Same
10. Parent Company Address if Different Than Above: _____
11. Facility contact familiar with the information contained in this application: Steve Nims
12. Title: Plant Manager
13. Telephone: (360) 998-2477
14. Claim of Confidentiality:
Some of the records and information contained in this application are ☐ are not ☒ (check one)
unique to the applicant and/or are likely to adversely affect the competitive position of the
applicant if released to the public or a competitor. If a claim of confidentiality is made for this
application, provide a separate application for general distribution which is devoid of confidential
information.
15. I certify that I am the responsible official, as defined in WAC 173-401-200(27) for this facility. I
further certify as required by WAC 173-401-520, that, based on information and belief formed
after reasonable inquiry, the statements and information in this application are true, accurate, and
complete.

Ronald J. Roberts 17 MARCH 2020 Director, Thermal Resources
Signature of Responsible Official Date Title

Ronald J. Roberts (425) 456-2442
Printed Name Phone Number

10885 NE 4th St, Bellevue, WA 98004
Mailing Address



Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

A_m2



Form 2: Emissions Units Form

Confidentiality Claim? Yes ☐ No ☒A-3



WASHINGTON STATE
ECLOGY

Air Operating Permit Application

Form 2: Emissions Units Form

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Emissions and Emissions Units						
Emissions Point Identifier	Emission Point Description (including existing air pollution control equipment)	Emissions			Compliance Assurance Monitoring	
		Annual Potential Emissions (for all regulated air pollutants) (tpy)	Have Potential Emissions Changed Since Submittal of Most Recent AOP Application?	Actual Emissions for Calendar Year <u>2018</u>	Annual Potential Emissions without regard to Control Device (tpy)	CAM needed? (yes or no)
EU-2	Stand-by Diesel Generator (Limit on annual operational hours)					
EU-2	NO _x	0.5	No	0.3	0.5	No
EU-2	CO	0.132	No	0.088	0.132	No
EU-2	SO ₂	7.9E-03	No	1.5E-04	7.9E-03	No
EU-2	PM ₁₀	8.9E-03	No	0.01	8.9E-03	No
EU-2	VOC	1.4E-02	No	0.0085	1.4E-02	No
EU-2	Benzene	1.2E-04	No	8.0E-05	1.2E-04	No
EU-2	Toluene	4.4E-05	No	2.9E-05	4.4E-05	No



Air Operating Permit Application

Form 2: Emissions Units Form

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Emissions and Emissions Units						
Emissions Point Identifier	Emission Point Description (including existing air pollution control equipment)	Emissions			Compliance Assurance Monitoring	
		Annual Potential Emissions (for all regulated air pollutants) (tpy)	Have Potential Emissions Changed Since Submittal of Most Recent AOP Application?	Actual Emissions for Calendar Year <u>2018</u>	Annual Potential Emissions without regard to Control Device (tpy)	CAM needed? (yes or no)
EU-2	Xylenes	3.0E-05	No	1.9E-05	3.0E-05	No
EU-2	Formaldehyde	1.2E-05	No	8.1E-05	1.2E-05	No
EU-2	Acetaldehyde	3.9E-06	No	2.6E-06	3.9E-06	No
EU-2	Acrolein	1.2E-06	No	8.0E-07	1.2E-06	No

Form 3: Facility SIC Codes and Products

Facility Name: PSE Sumas Generating Station
Confidentiality Claim? Yes ☐ No ☒

Principal Product Name	Principal Product Description	Maximum Annual Production	Units of Measure	SIC Code	SIC Description
Electricity	N/A	1.185 x 10 ⁶	MWHr	4911	Trans. And Utilities Elec. Services



WASHINGTON STATE
ECOLOGY

Air Operating Permit Application

Form 4: Process Information

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process Number	Process Name	SIC Code	Process Description
1	Elec. Generation	4911	<p>A generator is powered by a natural gas-fired combustion turbine (EU-1) and a steam turbine. The GE 7EA combustion turbine burns natural gas and exhausts into a heat recovery steam generator.</p> <p>The Emergency Generator (EU-2) is a diesel-fired generator that is installed to supply emergency power for plant lighting and heat during system power outages. Aqueous ammonia is stored on-site for use by the NO_x control system.</p>
EU-1	Combustion Turbine	4911	<p>The combustion turbine is a GE MS7000EA that combusts natural gas using steam injection combustor technology. During initial firing of the turbine, exhaust temperatures are controlled to meet the prescribed steam conditions of the steam turbine. Exhaust gas from the combustion turbine enters an unfired Heat Recovery Steam Generator (HRSG) for steam production. The exhaust gas passes through an SCR section prior to being discharged from the stack.</p>
EU-2	Emergency Diesel Generator	4911	<p>The emergency diesel generator is a Cummins Diesel Turbo rated at 671 BHP. The purpose of this device is to provide vital power to plant lighting and heat on a complete loss of power to the plant.</p>



WISCONSIN
DEPARTMENT OF
NATURAL RESOURCES

Air Operating Permit Application

Form 5: Raw Materials Used by Processes

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Number of Process Using Raw Material	Raw Material Name/Description	Maximum Annual Use	Unit of Measure
NA			



Wisconsin State Ecology Air Operating Permit Application

Form 6: Fuels Used by Processes

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Number of Process Using Fuel	Fuel Name/Description *	Maximum Annual Use	Unit of Measure
EU-1	Pipeline Natural Gas	9,707	MMscf
EU-2	Diesel fuel (on-road specification) for emergency generator	2,270	gallons/year



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA 342.1	Operation and Maintenance	Yes	Process and air pollution control equipment shall be kept in good operating condition and repair.	Keep records of appropriate maintenance and repair work when performed.
NWCAA 342.2	Operation Instructions and Maintenance Schedules	Yes	Operating instructions and maintenance schedules shall be available to facility operators.	Keep operating instructions and maintenance schedules on site and make available to operators.
NWCAA 530	General Nuisance	Yes	Emissions shall not cause damage, injury or an unreasonable interference with the enjoyment of life or property.	PSE shall promptly investigate complaints received by NWCAA. If the complaint is determined to be valid, corrective action shall commence within three working days or notification by NWCAA. NWCAA shall be notified of corrective actions taken and PSE will keep records of corrective actions in written logs.
WAC 173-400-040(5)	Emissions Detrimental to Persons or Property	Yes	No person shall cause or allow the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA 535	Odor Control Measures	Yes	Appropriate practices and control equipment shall be installed and operated to reduce odor-bearing gases emitted into the atmosphere. Any person unreasonably interfering with a property owner's use or enjoyment of his property must use recognized best practices to reduce odors to a reasonable minimum.	PSE shall promptly investigate complaints received by NWCAA. If the complaint is determined to be valid, corrective action shall commence within three working days or notification by NWCAA. NWCAA shall be notified of corrective actions taken and PSE will keep records of corrective actions in written logs.
WAC 173-400-040(4)	Odors	Yes	Source may not generate odors which may unreasonably interfere with property use and must use recognized good practice and procedures to reduce odors to a reasonable minimum.	



WASHINGTON STATE DEPARTMENT OF ECOLOGY Air Operating Permit Application

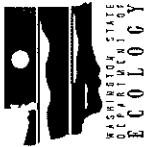
Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA 451.1	Emission of Air Contaminant – Visual Standards	Yes	Opacity shall not exceed 20% for any period aggregating more than 3 minutes in any sixty-minute period. Opacity shall be determined by US EPA Reference Method 9.	PSE shall perform monthly inspections of emission units EU-1 and EU-2 during daylight hours for the purpose of identifying potential visible emissions violations. Whenever visible emissions are observed during an inspection, PSE shall verify whether the equipment involved is experiencing a malfunction.
WAC 173-400-040(1)	Visible Emissions	Yes	Opacity shall not exceed 20% for any period aggregating more than 3 minutes in any sixty-minute period.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA 455.1	Emission of Particulate Matter	Yes	Emissions of particulate from combustion sources shall not exceed 0.1 gr/dscf corrected to 7% oxygen.	PSE will perform monthly inspections of emission units EU-1 and EU-2 during daylight hours for the purpose of identifying potential particulate matter/fugitive emissions violations. Whenever particulate matter fallout, visible emissions, or fugitive emissions are observed during the monthly inspection, PSE will confirm whether the equipment involved is experiencing a malfunction. PSE shall resolve identified problems within 24 hours of initial discovery, or notify NWCAA by the next working day of the progress made in resolving the problem.



ECOLGY Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA 455.11	Emission of Particulate Matter	Yes	Emissions from facilities combusting gaseous or distillate fuels shall not exceed 0.05 gr/dscf at 7% O ₂ .	PSE will perform monthly inspections of emission units EU-1 and EU-2 during daylight hours for the purpose of identifying potential particulate matter/fugitive emissions violations.
WAC 173-400-050(1) and (3)	Emission Standards for Combustion and Incineration Units	Yes	Emissions of particulate from combustion sources shall not exceed 0.1 gr/dscf corrected to 7% oxygen.	Whenever particulate matter fallout, visible emissions, or fugitive emissions are observed during the monthly inspection,
WAC 173-400-060	Emission Standards for General Process Units	Yes	Emissions of particulate from any general process shall not exceed 0.1 gr/dscf.	PSE will confirm whether the equipment involved is experiencing a malfunction.
NWCAA 550.1-3	Preventing Particulate Matter from Becoming Airborne	Yes	Install and operate Reasonably Available Control Technology (RACT) to prevent the release of fugitive particulate matter emissions. Off site deposition of particulate matter is prohibited.	PSE shall resolve identified problems within 24 hours of initial discovery, or notify NWCAA by the next working day of the progress made in resolving the problem.
NWCAA 550.4	Preventing Particulate Matter from Becoming Airborne	Yes	Off-site deposition of particulate matter, in sufficient quantity to interfere with the use and enjoyment of the property upon which it is deposited, is prohibited.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-400-040(2)	Fallout	Yes	Off-site deposition of particulate matter, in sufficient quantity to interfere with the use and enjoyment of the property upon which it is deposited, is prohibited.	PSE will perform monthly inspections of emission units EU-1 and EU-2 during daylight hours for the purpose of identifying potential particulate matter/fugitive emissions violations.
WAC 173-400-040(3)(a)	Fugitive Emissions	Yes	Sources engaged in materials handling, construction, demolition, or other such activities shall take reasonable precautions to prevent the release of fugitive emissions.	Whenever particulate matter fallout, visible emissions, or fugitive emissions are observed during the monthly inspection, PSE will confirm whether the equipment involved is experiencing a malfunction. PSE shall resolve identified problems within 24 hours of initial discovery, or notify NWCAA by the next working day of the progress made in resolving the problem.
WAC 173-400-040(8)	Fugitive Dust	Yes	Source shall take reasonable precautions to prevent the release of fugitive emissions.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA 462	Emission of Sulfur Compounds	Yes	Stack SO ₂ emissions limited to 1,000 ppmvd @ 7% O ₂ calculated on an hourly average.	The requirement to use only pipeline quality natural gas in the combustion turbine assures compliance with these three applicable requirements.
WAC 173-400-040(6)	Sulfur Dioxide	Yes	Stack SO ₂ concentration limited to 1,000 ppmvd @ 7% O ₂ hourly average.	
NWCAA 520	Sulfur Compounds in Fuel	Yes	Sulfur content of fuels burned shall not exceed: Gaseous fuels - 412 ppm @ standard temperature and pressure	



Air Operating Permit Application

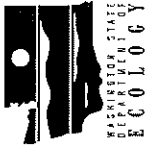
Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-401-615(3)	Monitoring and Related Recordkeeping and Reporting Requirements	Yes	Submit reports of all required monitoring to the NWCAA at least once every six months. All instances of deviations from permit requirements must be clearly identified in such reports. Monthly, quarterly, and semiannual reports are scheduled on a calendar basis. The reports shall be submitted within 30 days after the close of the period that the reports cover. All required monitoring reports must be certified by a responsible official.	PSE will submit reports of all required monitoring to the NWCAA at least once every six months. All instances of deviations from permit requirements will be clearly identified in such reports. Prompt reporting is no later than 12 hours for potential threats to human health. All other deviations will be reported in the next monitoring report, but no later than 30 days after the end of the month which the deviation was discovered. PSE will submit the reports within 30 days after the close of the period that the reports cover.
WAC 173-401-630(5)	Compliance Certification	No	Compliance certifications to be submitted to NWCAA once per year.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-400-040(7) NWCAA 540	Concealment and Masking	Yes	No person shall cause or allow the installation or use of any means which conceals or masks an emission of an air contaminant which would otherwise violate any provisions of WAC 173-400.	
40 CFR 60 Subpart A	Standards of Performance for New Stationary Sources – General Provisions	No	Comply with following requirements: notification and recordkeeping (60.7), performance testing (60.8), compliance with standards and maintenance (60.11), monitoring (60.13), modification (60.14), control device and work practice (60.18), and reporting (60.19).	PSE will follow all applicable 40 CFR 60 Subpart A (General Provision) requirements.
40 CFR 61.145(b) NWCAA 570	National Emission Standards For Asbestos - Demolition and Renovation Projects	No	Conduct all renovation, demolition, and asbestos projects in accordance with applicable asbestos control standards and requirements in 40 CFR 61.145 and 40 CFR 61.150.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
40 CFR 82 Subpart F	Protection of Stratospheric Ozone – Recycling and Emissions Reduction	No	Comply with the standards for recycling and emissions reductions of regulated refrigerant substances in 40 CFR 82 Subpart F.	
40 CFR 60.4 WAC 173-401-520	Report Submittals	No	Submit any application form, report, or compliance certification pursuant to pursuant to WAC 173-401-520 and addressed to NWCAA or the appropriate authority designated in 40 CFR 60.4.	
WAC 173-401-610 WAC 173-401-710	Permit Revision and Renewal	No	The operating permit shall be maintained for the duration pursuant to WAC 173-401-610 and renewed, issued and subject to the revocation terms in accordance with WAC 173-401-710.	



Permitting and Compliance ECOLGY Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-401-500(6)	Duty to Supplement or Correct Application	Yes	Promptly submit any supplementary facts or corrected information as identified and required for a permit application. In addition, additional information will be provided as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.	
WAC 173-400-105(1)	Emission Inventory	No	An inventory of emissions from the facility shall be submitted to NWCAA each year. The emissions inventory shall be submitted no later than one hundred five days after the end of the calendar year.	PSE will maintain records of information necessary to substantiate any reported emissions, consistent with the averaging times for the applicable standards, and will submit an annual emission inventory to NWCAA.



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-401-630(2) WAC 173-400-105(3)	Inspection and Entry	No	Authority personnel as indicated in WAC 173-401-630(2) shall have the power to enter, access, copy, inspect, sample or monitor pursuant to WAC 173-401-630(2) and WAC 173-400-105(3) for the purpose of investigating conditions specific to the control, recovery or release of air contaminants into the atmosphere.	
WAC 173-400-105(7) & (8)	Misrepresentation and Tampering	No	No person shall make any false material statement, representation or certification nor render inaccurate any monitoring device or method in accordance with the conditions of WAC 173-400-105(7) & (8).	
WAC 173-401-630(3) WAC 173-401-510(2)(h)(iii)(A) & (B)	Compliance Requirements	No	A compliance plan and schedule is required for each permit and its initial application.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-401-720	Emergency Provision and Transfer of Ownership or Operational Control	No	Administrative permit amendments shall be made in accordance with WAC 173-401-720.	
WAC 173-400-110 WAC 173-460-040 NWCAA 300	New Source Review	No	Comply with the terms of NWCAA 300 and WAC 173-400-110 for new sources and adhere to WAC 173-460-040 for requirements regarding toxic air pollutant sources.	PSE will continue to comply with the requirements of this regulation, and will submit an NOC application to the appropriate regulatory agency before constructing any new sources or modifying any existing sources for which an NOC would be required.
WAC 173-400-035 NWCAA 301	Portable Sources	Yes	Portable and temporary sources shall be operated in compliance with WAC 173-400-035 and NWCAA 301.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : 1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
WAC 173-400-107	Excess Emissions	No	A source is subject to the burden of proving that excess emissions were unavoidable, pursuant to WAC 173-400-107.	PSE will report excess emissions which represent a potential threat to human health or safety or which PSE believes to be unavoidable to NWCAA as soon as possible. Other excess emissions shall be reported within thirty days after the end of the month during which the event occurred or as part of the routine emission monitoring reports.
WAC 173-425 NWCAA 502	Open Burning	Yes	Comply with the terms regarding outdoor burning pursuant to WAC 173-425.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : EU-1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
40 CFR Subpart GG	Standards of Performance for Gas Turbines	No	Emission limits for each Gas Turbine pursuant to 60.332(a)(1), 60.332(b), 60.333 and 60.334(b)(2). 150 ppm SO ₂ or fuel with less than 0.8% sulfur Install, operate, and maintain a CEMS for NO _x and O ₂	The NO _x emission limits for the PSE CGT are lower than the NSPS limits. The PSE turbine shall burn pipeline grade natural gas only. PSE maintains a CEMS for NO _x and O ₂ .
WAC 173-406 40 CFR 72 through 75	Acid Rain Provisions	No	Apply for Acid Rain Permit and hold SO ₂ allowances prior to start of operation, in accordance with 40 CFR 72.9(c)(3)(iv), 72.40(a) and WAC 173-406-106(3)(a)(i)&(ii).	PSE submitted an Acid Rain permit application to EPA, which is included with this air operating permit application (Appendix B), and holds SO ₂ allowances.
NWCAA OAC 304(d) Condition 1(a)	Combustion Turbine NO _x Limit	No	Shall not exceed: 6 ppm _{dv} corrected to 15% O ₂ , calendar day average; 18.1 lb/hr, calendar day average; 75 tons/year	Routine compliance based on NO _x and O ₂ CEMS and exhaust gas flow rate calculations.



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : EU-1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA OAC 304(d) Condition 1(b)	Combustion Turbine CO Limit	No	Shall not exceed: 6 ppm _{dv} corrected to 15% O ₂ , one-hour average; 12.6 lb/hr; 52 tons/year. CO limits to apply at all times except during a time period not to exceed two hours during startup.	Annual source test using EPA Method 10 required.



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: EU-1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA OAC 304(d) Condition 1(c)	Combustion Turbine Opacity Limit	No	Shall not exceed a six minute average opacity of 5 percent. Opacity shall be determined by US EPA Reference Method 9.	PSE shall perform monthly inspections of emission unit EU-1 during daylight hours for the purpose of identifying potential visible emissions violations. Whenever visible emissions are observed during an inspection, PSE shall verify whether the equipment involved is experiencing a malfunction.



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: EU-1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA OAC 304(d) Condition 1(d)	Combustion Turbine NH3	No	Shall not exceed: 10 ppmdv corrected to 15% O ₂ , one-hour average; 13.3 lb/hr; 55 tons/year.	Annual source test required
NWCAA OAC 304(d) Condition 4	Source Testing Requirements	No	Annual source testing for CO and NH ₃ emissions shall be conducted for the gas turbine stack at least once per calendar year. All source testing shall be conducted, and plans and test results submitted in accordance with NWCAA Section 367 and NWCAA Appendix A.	Source testing shall be conducted using EPA Method 10 and BAAQMD Method ST-1B for CO and NH ₃ emissions, respectively.



Air Operating Permit Application

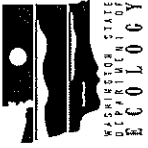
Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : EU-1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
40 CFR 60.12	Shall Not Conceal Emissions	No	No person shall cause or allow the installation or use of any means which conceals or masks an emission of an air contaminant which would otherwise violate any provisions of WAC 173-400 or 40 CFR 60.12.	
40 CFR 60.11(d)	Good air pollution control practices	No	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.	



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : EU-1

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA OAC 304(d) Condition 6	Fuel Requirements	No	The turbine shall burn pipeline grade natural gas only.	PSE records the amount of natural gas fired into the combustion turbine and maintains monthly records, including natural gas purchase receipts.



Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process # : EU-2

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
NWCAA OAC 304(d) Condition 7	Operational Limit	No	The standby generator shall not be operated more than 132 hours in any calendar year.	The number of hours the standby diesel generator has operated shall be recorded and reported to NWCAA on a calendar month basis.



Air Operating Permit Application

Form 8: Compliance Schedule

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: 1

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
NWCAA 342.1	In	Continuous	PSE keeps records of appropriate maintenance and repair work on process and air pollution control equipment.
NWCAA 342.2	In	Continuous	Operating instructions and maintenance schedules are on site and available for PSE operators.
NWCAA 530	In	Continuous	PSE has not received any complaints.
WAC 173-400-040(5)	In	Continuous	PSE has not received any complaints.
NWCAA 535	In	Continuous	PSE has not received any odor complaints.
WAC 173-400-040(4)	In	Continuous	PSE has not received any odor complaints.
NWCAA 451.1	In	Continuous	PSE personnel checking for visible emissions.
WAC 173-400-040(1)	In	Continuous	PSE personnel checking for visible emissions.
NWCAA 455.1	In	Continuous	PSE personnel checking for visible emissions.



Air Operating Permit Application

Form 8: Compliance Schedule

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: 1

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
NWCAA 455.11	In	Continuous	PSE personnel checking for visible emissions.
WAC 173-400-050(1) and (3)	In	Continuous	PSE personnel checking for visible emissions.
WAC 173-400-060	In	Continuous	PSE personnel checking for visible emissions.
NWCAA 550.1-3	In	Continuous	PSE has not received any fugitive dust complaints.
NWCAA 550.4	In	Continuous	PSE has not received any fugitive dust complaints.
WAC 173-400-040(2)	In	Continuous	PSE has not received any fugitive dust complaints.
WAC 173-400-040(3)(a)	In	Continuous	PSE has not received any fugitive dust complaints.
WAC 173-400-040(8)	In	Continuous	PSE has not received any fugitive dust complaints.
NWCAA 462	In	Continuous	Pipeline natural gas sulfur content measured by Williams NW Pipeline.
WAC 173-400-040(6)	In	Continuous	Pipeline natural gas sulfur content measured by Williams NW Pipeline.



WASHINGTON STATE
ECOLOGY

Air Operating Permit Application

Form 8: Compliance Schedule

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: 1

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
NWCAA 520	In	Continuous	PSE combusts pipeline quality natural gas.
WAC 173-401-615(3)	In	Continuous	PSE will submit all required monitoring reports to NWCAA.
WAC 173-401-630(5)	In	Continuous	PSE submit all required compliance certifications to NWCAA.
WAC 173-400-105(1)	In	Continuous	PSE will submit an annual emission inventory to NWCAA.
WAC 173-401-630(3)	In	Continuous	PSE is complying with this requirement by submitting a compliance schedule with this air operating permit application.
WAC 173-401-510(2)(h)(iii)(A) & (B)	In	Continuous	PSE is not proposing any physical or operational changes in the facility nor any increase in potential emissions of air pollutants. PSE currently operates in accordance with NWCAA OAC 304(d).
WAC 173-400-110	In	Continuous	
WAC 173-460-040			
NWCAA 300			

- The source shall continue to comply with applicable requirements with which it is currently in compliance.
- The source shall meet applicable requirements on a timely basis that become effective during the permit term.
- A Schedule of Compliance, for any applicable requirement that the source is out-of-compliance, must accompany this application.
- The source shall meet the Compliance Schedule in order to assure continuous compliance with all applicable requirements.



Air Operating Permit Application

Form 8: Compliance Schedule

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: EU-1

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
NWCAA OAC 304(d) Condition 1(a)	In	Continuous	PSE installed and operates NOx and O2 CEMS and reports emissions monthly. All applicable records are maintained on-site.
NWCAA OAC 304(d) Condition 1(b)	In	Continuous	PSE conducted initial source testing according to OAC 304. Testing results were submitted to NWCAA. PSE complied with the Reporting requirements by submitting necessary information to NWCAA. All applicable records are maintained on-site.
NWCAA OAC 304(d) Condition 1(c)	In	Continuous	PSE personnel check for visible emissions.



Air Operating Permit Application

Form 8: Compliance Schedule

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: EU-1

Applicable	Current Compliance	Compliance Status over Past	Method used to Determine Compliance
NWCAA OAC 304(d) Condition 1(d)	In	Continuous	PSE complied with the Reporting requirements by submitting necessary information to NWCAA. All applicable records are maintained on-site.
NWCAA OAC 304(d) Condition 4	In	Continuous	PSE will perform annual source testing as required for CO and N and submit test results in accordance with NWCAA Section 367 and NWCAA Appendix A.
NWCAA OAC 304(d) Condition 5	In	Continuous	PSE will maintain records of monthly reports to NWCAA.
NWCAA OAC 304(d) Condition 3 and 6	In	Continuous	PSE continues to maintain records of total natural gas combusted in the gas turbine on a monthly basis.

- The source shall continue to comply with applicable requirements with which it is currently in compliance.
- The source shall meet applicable requirements on a timely basis that become effective during the permit term.
- A Schedule of Compliance, for any applicable requirement that the source is out-of-compliance, must accompany this application.
- The source shall meet the Compliance Schedule in order to assure continuous compliance with all applicable requirements.



Air Operating Permit Application

Form 8: Compliance Schedule

Facility Name: PSE Sumas Generating Station

Confidentiality Claim? Yes ☐ No ☒

Process #: EU-2

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
NWCAA OAC 304(d) Condition 7	In	Continuous	PSE records and reports to NWCAA the number of generator operating hours on a calendar month basis.

- The source shall continue to comply with applicable requirements with which it is currently in compliance.
- The source shall meet applicable requirements on a timely basis that become effective during the permit term.
- A Schedule of Compliance, for any applicable requirement that the source is out-of-compliance, must accompany this application.
- The source shall meet the Compliance Schedule in order to assure continuous compliance with all applicable requirements.

PSE Sumas Generating Station

1340 Thompson Lane

Sumas, Washington

2018 Emission Inventory

#1 Combustion Turbine Stack

CEMS			ESTIMATED EMISSIONS					
Operating	Natural Gas	Total HI						
Hours	Cons (klbs)	MMBtu	NOx (lbs)	SO2 (lbs)	NH3 (lbs)	CO (lbs)	VOC (lbs)	PM (lbs)
2,620	99,228	2,430,426	40,743	3,796	27,642	6,097	29	13,367
	Gas	HI	NOx	SO2	NH3	CO	VOC	PM
	(MMCF)		(tons)	(tons)	(tons)	(tons)	(tons)	(tons)
	2,209.6		20	2	14	3	0	7

#2 Emergency Diesel Generator

Monitored			ESTIMATED					
Operating	Diesel Fuel	Total HI						
Hours	Cons (Gal)	MMBtu	NOx (lbs)	SO2 (lbs)		CO (lbs)	VOC (lbs)	PM (lbs)
48	1,480	207	663	0		176	17	21
	Diesel	HI	Nox	SO2		CO	VOC	PM
	(KGal)		(tons)	(tons)		(tons)	(tons)	(tons)
	1		0	0		0	0	0

Plant Totals

			41,406	3,796	27,642	6,274	46	13,388
			NOx	SO2	NH3	CO	VOC	PM
			(tons)	(tons)	(tons)	(tons)	(tons)	(tons)
			21	2	14	3	0	7

PSE Sumas Generating Station

1340 Thompson Lane

Sumas, Washington

2017 Emission Inventory

#1 Combustion Turbine Stack

CEMS			ESTIMATED EMISSIONS					
Operating	Natural Gas	Total HI						
<u>Hours</u>	<u>Cons (klbs)</u>	<u>MMBtu</u>	<u>NOx (lbs)</u>	<u>SO2 (lbs)</u>	<u>NH3 (lbs)</u>	<u>CO (lbs)</u>	<u>VOC (lbs)</u>	<u>PM (lbs)</u>
2,608	95,477	2,324,954	39,536	3,956	23,715	2,557	28	12,787
	Gas	HI	NOx	SO2	NH3	CO	VOC	PM
	<u>(MMCF)</u>		<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>
	2,126.0		20	2	12	1	0	6

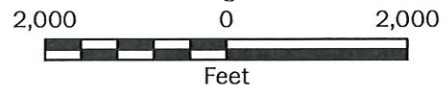
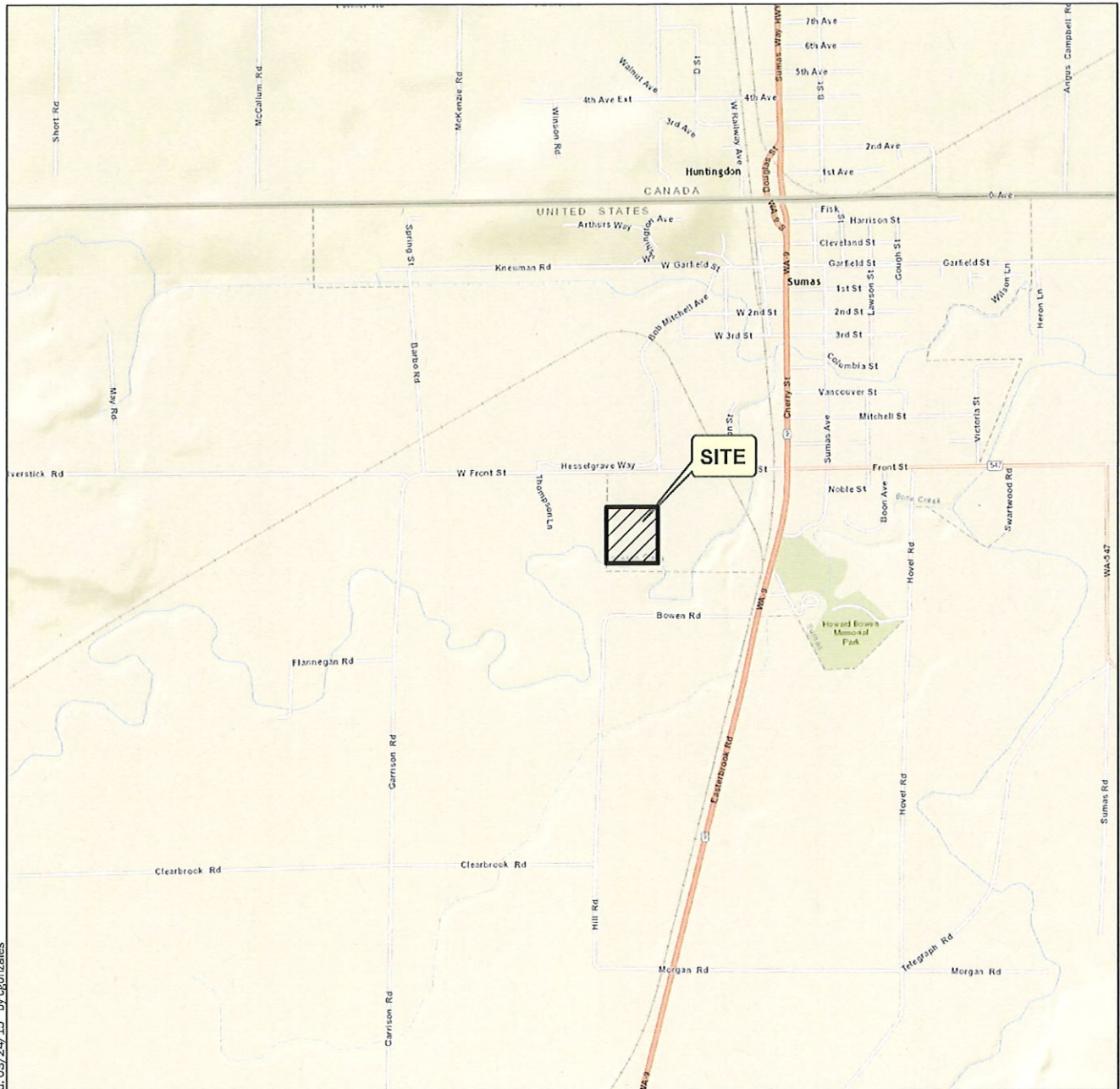
#2 Emergency Diesel Generator

Monitored			ESTIMATED					
Operating	Diesel Fuel	Total HI						
<u>Hours</u>	<u>Cons (Gal)</u>	<u>MMBtu</u>	<u>NOx (lbs)</u>	<u>SO2 (lbs)</u>		<u>CO (lbs)</u>	<u>VOC (lbs)</u>	<u>PM (lbs)</u>
96	3,181	445	1,425	1		378	36	45
	Diesel	HI	Nox	SO2		CO	VOC	PM
	<u>(KGal)</u>		<u>(tons)</u>	<u>(tons)</u>		<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>
	3		1	0		0	0	0

Plant Totals

	40,961	3,957	23,715	2,936	64	12,832
	NOx	SO2	NH3	CO	VOC	PM
	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>	<u>(tons)</u>
	20	2	12	1	0	6

Site Plan and Process Flow Diagram



Vicinity Map

Sumas Generating Station
Sumas, Washington

GEOENGINEERS

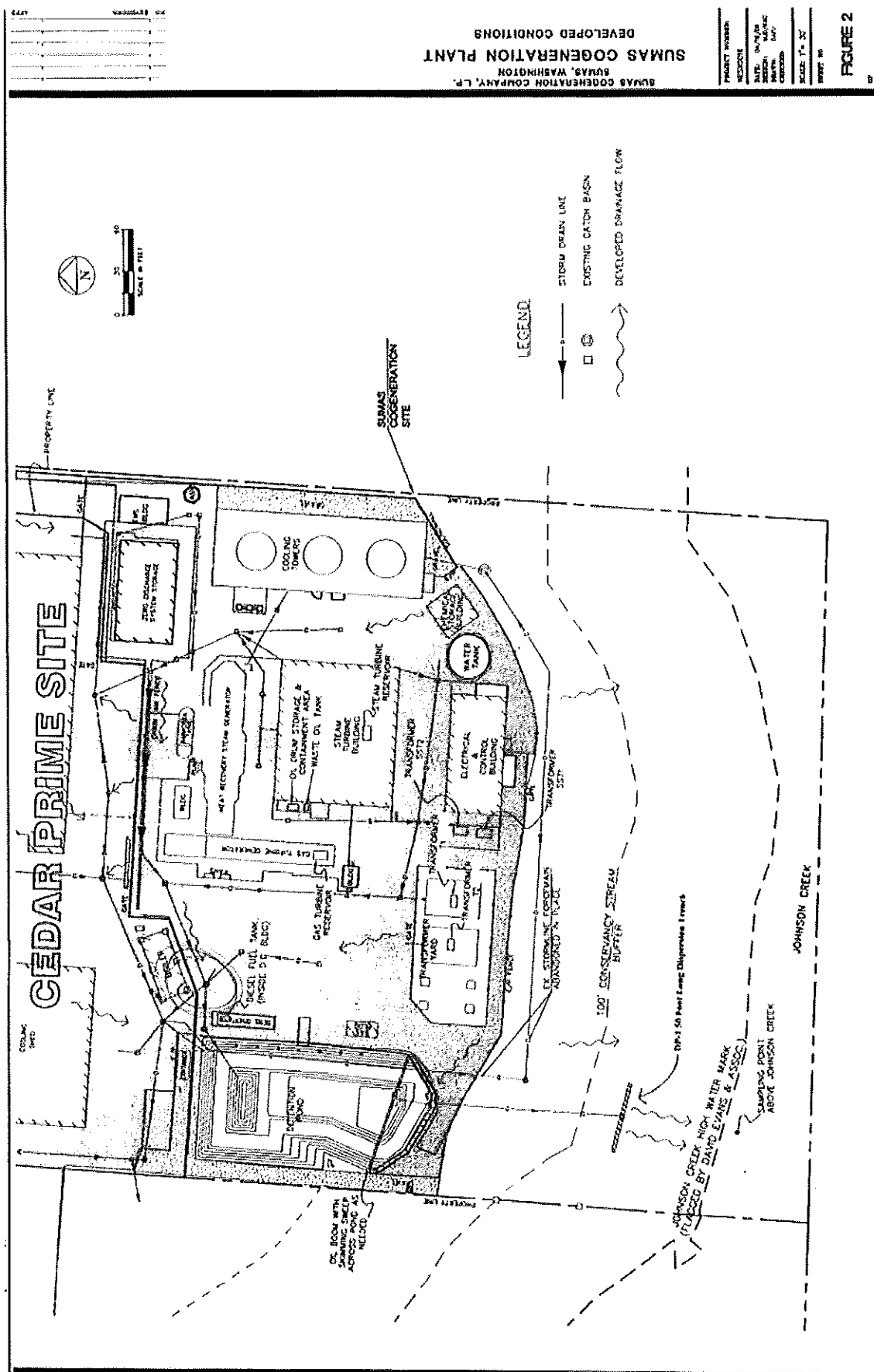
Figure 1

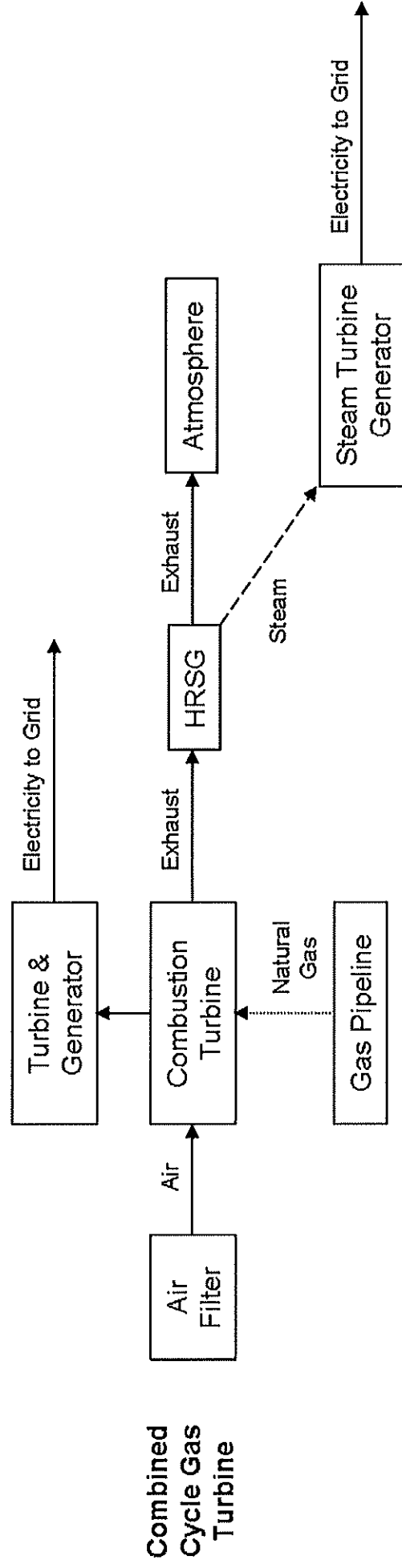
Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI Data & Maps

Projection: NAD 1983 UTM Zone 10N





Puget Sound Energy Sumas Generating Station – Process Flow Diagram