

**SATSOP COMBUSTION TURBINE PROJECT PHASE II  
SEPA ENVIRONMENTAL CHECKLIST**

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## **SATSOP COMBUSTION TURBINE PROJECT PHASE II ENVIRONMENTAL CHECKLIST**

### **WAC 197-11-960 Environmental Checklist**

#### ***Purpose of checklist:***

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

#### ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

#### ***Use of checklist for nonproject proposals:***

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." In addition, complete the supplemental sheet for nonproject actions (Part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

**A. BACKGROUND**

**1. Name of proposed project, if applicable:**

Satsop Combustion Turbine Project Phase II (Satsop CT Phase II)

**2. Name of applicant:**

Duke Energy Grays Harbor, LLC and Energy Northwest

**3. Address and phone number of applicant and contact person:**

Mr. Michael J. Sotak, Duke Energy  
Ms. Laura Schinnell, Energy Northwest  
P.O. Box 26  
Satsop, WA 99583  
(360) 482-7700

**4. Date checklist prepared:**

Draft Expanded Checklist submitted December 17, 2001

**5. Agency requesting checklist:**

The Washington State Energy Facility Site Evaluation Council (EFSEC) will act as the lead agency. Washington Department of Ecology also has an interest related to Air Quality (PSD Permit), water rights and quality, wastewater disposal, stormwater discharges, spill prevention control, and notification of dangerous waste activities. Grays Harbor County has an interest in the on-site sewer system, building approval, and county road permits. See also permits and approvals listed in Supplemental Section A-10.

**6. Proposed timing or schedule (including phasing, if applicable):**

Permitting, SEPA Review, engineering and design 11/2001 – 8/2002  
Construction 9/2002 – 6/2004  
Commercial Operation 6/2004

**7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

No. This proposed project is an expansion to Phase I of the Satsop CT Project, located totally within the approved site for Phase 1.

**8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

- Application for Amendment 4 to the Site Certification Agreement, Satsop Combustion Turbine Project Phase II, November 2001, submitted to Washington Energy Facility Site Evaluation Council.
- Resource Contingency Program – Washington Final Environmental Impact Statement Satsop Combustion Turbine Unit 1 Chehalis Generation Facility, November 1995, Bonneville Power Administration.

**9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

None are pending.

**10. List any government approvals or permits that will be needed for your proposal, if known.**

The following government approvals or permits were issued for Satsop CT Project Phase I and would apply to Phase II also, since Phase II would be located within the same footprint.

*NEPA Compliance:* The Satsop CT Project was one of three projects in BPA's Resource Contingency Program (RCP). Bonneville published a Final Environmental Impact Statement (EIS) and Record of Decision in 1995. Phase II does not require federal action, and no NEPA action is required.

*Endangered Species Act Consultation:* Consultation with both USFWS and Washington Department of Fish and Wildlife was completed as part of the NEPA compliance process for Phase I. Phase II will not trigger the need for new consultation.

*Water Rights:* Water for Phase II will be obtained from Grays Harbor Public Development Authority pursuant to the PDA's existing water rights. Additional water rights will not be required.

*Stormwater Discharge:* All stormwater drainage from the CT site is routed to the C-1 erosion control pond, which is designed and maintained to handle a 100-year storm. This pond has not discharged since the West Park (formerly Cooley Laydown) area was stabilized in the early 1980's, even during a 100-year rainfall event. In the unlikely event discharge appears possible, EFSEC and Ecology will

be notified. Drainage to the pond will be monitored in accordance with the existing Environmental Protection Control Plan.

*Spill Prevention Control and Countermeasures (SPCC) Plan:* The SPCC plan for the Satsop CT Project was approved by EFSEC on September 19, 2001.

*Notification of Dangerous Waste Activities:* An active state identification number has been issued for the CT project. This request for an amendment to the SCA provides EFSEC with information on (1) waste streams, compositions, and volumes, and (2) hazardous waste activities. Stipulations on methods of handling dangerous wastes are expected to be included in the amended SCA issued by EFSEC and are expected to be similar to those included in the existing SCA.

*Consultation with State Historic Preservation Office:* Construction of Phase II is in areas previously disturbed by nuclear plant construction and/or Phase I construction and no further action is required.

*On-Site Sewage System:* The request for an amendment to the SCA provides EFSEC with relevant information on the proposed septic system for the CT project. Following current EFSEC requirements, design details will be submitted to EFSEC and Grays Harbor County for final approval. Design will meet Grays Harbor County requirements.

*Shoreline Substantial Development Approval:* Phase I was shown to be consistent with Grays Harbor County Shoreline Master Management Plan. This consistency determination was required because auxiliary features (natural gas pipeline and transmission lines) crossed areas subject to the Shoreline Act. Phase II is entirely within the Phase I plant site, which is outside the boundaries of the Shoreline Master Management Plan.

*Land Use and Zoning Compliance:* As part of the SCA amendment for Phase I, the location of energy facilities at the Satsop CT site was found to be consistent with the Grays Harbor County Zoning Code. The site has since been rezoned to I-2 expressly to permit energy facilities. No new determination of consistency is required for Phase II.

The following government approvals or permits are required for Phase II:

*Federal Aviation Administration Approval:* In August 2001, applications were submitted to the FAA for the exhaust stacks for Phase I. We do not expect that the FAA will require lighting. Similar applications will be filed for Phase II in 2002.

*State Environmental Policy Act (SEPA):* EFSEC performs SEPA compliance for the Phase II project as a part of its review of the Certificate Holder's request for an amendment to their Site Certification Agreement (SCA). This checklist accompanies the BPA NEPA EIS issued in 1995. *Air Quality (PSD Permit):* The request for an amendment to the Site Certification Agreement (SCA) includes a PSD Permit Amendment Application for EFSEC review and approval. The SCA amendment is expected to include a PSD Permit amendment that will stipulate limits on emission levels from both Phase I and Phase II.

*Wastewater Disposal:* The discharge from the Phase II project will comply with the stipulations of the existing NPDES permit and will use the existing discharge pipeline and outfall. An amendment to add Phase II discharge as a waste stream to the existing NPDES permit was submitted to EFSEC on December 10, 2001. It is anticipated that the amended NPDES permit will be included in the amended SCA issued by EFSEC.

*Building Approval for Phase II:* Building plans will be in compliance with the Grays Harbor County Building Code. Following current EFSEC procedures, it is anticipated that EFSEC will contract with Grays Harbor County to review and approve drawings and specifications related to public health and safety as has been done with Phase I.

*County Road Permit:* When needed for Phase II, county road permits will be obtained from Grays Harbor County for hauling of materials to the site. Road access and work in county road right-of-way permits will also be obtained if needed.

A summary list of the required permits and approvals is included as Supplemental Section A-10 of this checklist.

- 11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

Duke Energy Grays Harbor, LLC, and Energy Northwest (collectively, the Certificate Holder) are proposing to expand the existing Satsop Combustion Turbine (CT) Project by constructing and operating the Phase II power plant. As with Phase I, the project is to generate electricity to help supply growing regional electrical loads. Phase II will consist of a combined-cycle plant with an average output of approximately 650 megawatts (MW) per year.

Phase II will be constructed on the approximately 22-acre Satsop CT project site for which a Site Certification Agreement has already been approved by the State of Washington. The Phase II project will be entirely within the boundaries of the permitted site.

The fuel will be natural gas that will be supplied by a pipeline constructed as part of the Phase I development.

Power produced by Phase II will be routed through transmission lines that will connect to the BPA system at BPA's Satsop substation, approximately 4,000 feet east of the project site. As a part of Phase I, new transmission lines will be installed in the existing BPA right-of-way (on land owned by the Grays Harbor Public Development Authority) from the site to the substation and these lines are adequate for the power transmission from Phase II. No new transmission lines for the connection to the substation will be required to serve Phase II.

A more detailed description, including a project location map, a project site map, and other relevant data describing the project, is attached as Supplemental Section A-11 Site Description and Supplemental Section A-12 Project Description.

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The approved site is located at 401 Keys Road, on property owned by Duke Energy Grays Harbor, LLC. The 1600-acre Satsop Development Park surrounds the site on all four sides and is located near the town of Elma. The site is located along a plateau approximately 290 to 315 feet in elevation situated about 0.5 mile southwest of the Chehalis River, and 3 miles southeast of Satsop, Washington. Fuller Creek is approximately 0.5 mile to the east, and Workman Creek is located approximately 2 miles to the east. Phase II would be located entirely within the approximately 22-acre site approved by Site Certification Agreement (SCA) for the Satsop Combustion Turbine (CT) Project. The legal description, as provided for Phase I, is as follows.

The Satsop Combustion Turbine Project is located as follows:

All that portion of the southwest quarter of the southeast quarter of Section 7, Township 17 North, Range 6 West, W.M. described as follows:

Commencing at the south quarter corner of said Section 7;  
Thence S88°58'07"E along the south line of said Section 7, a distance of 1026.55 feet;  
Thence N03°30'07"E, 291.86 feet to a point on the north line of the Bonneville Power Administration (B.P.A.) right of way and the POINT OF BEGINNING;  
Thence continuing N03°30'07"E, 545.21 feet;  
Thence N86°29'56"W, 989.04 feet to a point on the east line of Keys Road right of way;  
Thence S03°46'56"W along said east line of Keys Road, 595.78 feet to an intersection with said north line of the B.P.A. right of way.  
Thence S88°48'12"E along said north line of the B.P.A. right of way, 904.96 feet;  
Thence N84°19'49"E along said north line of the B.P.A. right of way, 88.86 feet to the POINT OF BEGINNING.

Situated in Grays Harbor County, Washington

and:

All that portion of the southwest quarter of the southeast quarter of Section 7, Township 17 North, Range 6 West, W.M. described as follows:

Commencing at the south quarter corner of said Section 7;  
Thence S88°58'07"E along the south line of said Section 7 a distance of 1026.55 feet;  
Thence N03°30'07"E, 837.07 feet to the POINT OF THE BEGINNING;  
Thence continuing N03°30'07"E, 319.39 feet;  
Thence N86°29'53"W, 220.60 feet;  
Thence N03°30'07"E, 107.60 feet;  
Thence N86°29'53"W, 766.35 feet to a point on the east line of Keys Road right of way;  
Thence S03°46'56"W along said east line of Keys Road, 427.00 feet;  
Thence S86°29'53"E, 989.04 feet to the POINT OF BEGINNING.

Situated in Grays Harbor County, Washington

A project location map with topography and a project site map are included in Supplemental Section A-11 Site Description. The plant configuration and site plan are included in Supplemental Section A-12 Project Description.

The existing transmission line corridor contains two high-voltage transmission lines and one distribution line and is maintained with only grass and low vegetation except within the Fuller Creek drainage channel. The creek is incised approximately 120 feet below the surrounding ground surface, and there is a small concrete and rock dam and drain pipe within the creek in the right-of-way. No new transmission lines will be constructed for Phase II.

Phase II's gas supply will be provided by the natural gas pipeline being constructed for Phase I. No additional pipelines are required for Phase II.

## **B. ENVIRONMENTAL ELEMENTS**

### **1. Earth**

#### **a. General description of the site (check one):**

- |                                     |                |                          |                     |
|-------------------------------------|----------------|--------------------------|---------------------|
| <input checked="" type="checkbox"/> | <b>Flat</b>    | <input type="checkbox"/> | <b>Steep slopes</b> |
| <input type="checkbox"/>            | <b>Rolling</b> | <input type="checkbox"/> | <b>Mountainous</b>  |
| <input type="checkbox"/>            | <b>Hilly</b>   | <input type="checkbox"/> | <b>Other</b>        |

The proposed plant site is located on a flat terrace above the Chehalis River in a region characterized by finely dissected uplands cut by the valley of the Chehalis River. The terrace lies at an elevation of approximately 305 feet (93 meters) above mean sea level (MSL), 300 feet (91 meters) above the Chehalis River. The gravel-covered ground surface slopes gently downward to the west and north, with a total topographic relief across the site of about 30 feet. The low point of the site is at approximately Elevation 284 at the northwest corner. Terrain in the vicinity is complex toward the south and east with elevations reaching above 1,200 feet mean sea level. To the north and west is farmland and the valley terrain of the Chehalis River.

#### **b. What is the steepest slope on the site (approximate percent slope)?**

The slope at the plant site itself has a rating of 1 (low; 0 to 5% slope).

#### **c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

Soils consisted of up to approximately 75 feet of alluvial soils interpreted as Helm Creek deposits, overlying decomposed sandstone from the Astoria Formation.

The specific description of each soil unit, proceeding downward from the ground surface, is as follows:

- Gravel Surfacing - The site is covered with a gravel fill approximately 1.5 to 2.5 feet in thickness. The gravel is subrounded, reasonably well graded and contains some silt and sand as well as cobbles. At the base of this fill cover is a geotextile.
- Stratum 1 - Reddish Brown Medium Stiff to Stiff SILT. This soil layer is typically 5 to 12 feet thick, and medium stiff to stiff in character based on N-values, cone tip resistances, pocket penetrometer test values and unconfined compression test values. Other laboratory tests indicate that this silt is moderately to highly plastic (liquid limit of 54) and moderately compressible. Moisture contents were usually in the range of 38 to 44 percent.
- Stratum 2 - Yellowish Brown Silty SAND to Sandy SILT. This soil layer grades between a fine sand and a silt, and typically exhibits the character of a fine-grained soil. The layer is only 4 to 10 feet thick along the western 200 feet of the site, but is typically 20 to 30 feet thick elsewhere. The soil would be characterized as stiff based on N-values and cone tip resistance values. Laboratory tests indicate that the fines content of the layer ranges from 39 to 65 percent for the samples tested. The fines appear to be non-plastic. Consolidation tests indicate that the soil is moderately compressible but drains quickly. High natural moisture contents in the range of 40 to 50 percent were measured.
- Stratum 3 - Multi-colored Medium Dense to Dense Gravelly SAND. This layer typically consists of well-graded sand with 15 to 50 percent gravel and 15 to 25 percent fines. The apparently re-worked sediments show color variations that include red, green, gray, brown and white. This layer is at least 25 feet thick, and more typically the thickness exceeds 35 feet. N-values and cone tip resistance values suggest that the layer is medium dense to dense in character.
- Stratum 4 - Brown to Grayish Brown Silty SAND. This layer is interpreted to be a residual soil derived from the Astoria Sandstone formation. It is primarily silty sand, but contains occasional zones that are primarily silt. N-values and cone tip resistance values suggest that the soil is dense in character. The

last sample collected in boring B-3, at a depth of 111 feet bgs, appeared to be the weathered top of the Astoria sandstone.

**d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

None.

**e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

The planned finished grade of the project will be approximately elevation 305. Therefore, Phase II construction will require some cutting and filling that will have an insignificant impact on topography. The amount of material to be removed and replaced is 80,000 cubic yards and the fill will come from local borrow pits with suitable materials.

**f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

The soils underlying the proposed plant site and in the immediate vicinity of the site have been assigned K factors of between 0.15 to 0.32 at the depths expected to be disturbed during construction (Soil Conservation Service, no date). These values correspond to a high potential for soil erosion. The slope at the plant site itself has a rating of 1 (low); slopes adjacent to Fuller Creek to the east have a slope rating of 3 (high). It is anticipated that the majority of disturbance during the plant construction and operation will occur on the relatively flat bench away from the creek. The Certificate Holder has an EFSEC-approved Erosion Control and Sedimentation Plan for the Phase I project which covers the entire site, including the area proposed for Phase II project. This plan is applicable to Phase II and is designed to prevent and/or minimize the potential for erosion. See Environmental Commitments Book, August 2001, for a description of the approved measures. Implementation of the plan will result in minimal if any erosion impacts.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

The Phase II site was previously graded and covered with a layer of gravel for use as an equipment and material laydown area during construction of Phase I. Additional grading will be required to prepare the site for construction of Phase II. Approximately 90 percent of the site would be impervious (including graveled surfaces).

The EFSEC-approved Erosion and Sedimentation Control Plan and an Environmental Protection Control Plan provide surface water runoff controls for Phase II construction and operation.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

The EFSEC-approved Erosion and Sedimentation Control Plan and an Environmental Protection Control Plan provide surface water runoff controls for Phase II construction and operation.

There should be no other impacts on the earth.

**2. Air**

**a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

Phase II of the Satsop CT Project will be a modification to a major stationary source located in an area that is in attainment for all criteria pollutants. For more information, see Supplemental Section B-2.

Emissions of regulated pollutants, including fugitive dust, could occur from construction activities. The primary sources of pollution would be vehicle exhaust and fugitive dust caused by equipment movement and excavation. Incremental vehicular emissions would occur as site workers commute to and from the construction site, but would not represent a significant increase in emissions. Excavation, trenching, backfilling, grading, and similar activities could generate dust during construction. Construction impacts would be temporary and are not expected to result in significant air quality impacts.

During operation, the entire Satsop CT project (Phase I plus proposed Phase II project) has the potential to emit 588 tons per year of nitrogen oxides (NO<sub>x</sub>), 883 tons per year of carbon monoxide (CO), 195 tons per year of volatile organic compounds (VOCs), 436 tons per year particulate matter (PM<sub>10</sub>), and 23 tons per year of sulfur dioxide (SO<sub>x</sub>).

**b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

None.

**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

- During construction activities such as excavation, trenching, backfilling, and grading, dry soil in the active construction area would be sprayed with water to minimize fugitive dust emissions.
- Access roads will be graveled or paved during construction to minimize dust emissions.
- To reduce air pollutant emissions from the power generating units, auxiliary boilers, backup diesel generators, and cooling towers, best available control technology (BACT) will be utilized.
- Mitigation of potential impacts to air quality will be accomplished with the use of BACT. Project emissions to the atmosphere will be in compliance with applicable state and federal regulations.
- The Certificate Holder will maintain and operate equipment in accordance with vendor recommendations and generally accepted practices in order to prevent excessive emissions and minimize fuel consumption.

**3. Water**

**a. Surface:**

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

The site is situated along the southern bank of the Chehalis River with Fuller Creek approximately 0.5 miles to the east and Workman Creek 2 miles to the east. Both Fuller and Workman Creeks drain into the Chehalis River from the south. Fuller Creek's drainage basin faces northeast and covers approximately 2 square miles. The Workman Creek drainage basin, which drains into the Chehalis River east of the plant site, faces northeast and covers approximately 16 square miles. The Elizabeth Creek drainage basin, encompassing approximately 4 square miles, enters the Chehalis River from the south near RM 17 crossing through the existing Ranney Well field. The Ranney

Well field will be the process water source for the site. The Satsop River basin, approximately 2.5 miles from the site, faces south and covers an area of 299 square miles (PNRBC 1970). A small drainage basin between Workman Creek and Fuller Creek is drained by Purgatory Creek. No wetlands exist on the project site.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

No.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

None.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No surface water diversions will be required for site development. Process water for power plant operation, with a maximum instantaneous withdrawal of 9.5 cubic feet per second, will be drawn from the Ranney Well field on the Chehalis River floodplain at RM 17. Approximately 88 percent of the well supply is drawn from the Chehalis River via drawdown. The remaining 12 percent is drawn from shallow alluvial groundwater.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No. The plant site is over 300 feet above the flood plain of the Chehalis River. The site is outside of any flood zone listed on the FEMA maps. The probable maximum flood (PMF) at the site was computed to be 53.1 feet mean sea level (MSL). The elevation of the plant site ranges from about 290 to 315 feet MSL and therefore the plant site is not within the flood hazard area.

**6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

The co-mingled waste streams (cooling tower blowdown water and waste stream from the oil-water separator after oil separation) will be discharged to the Satsop Development Park's blowdown line in accordance with the NPDES permit (Permit No. WA-002496-1) for the Satsop CT Project. The outfall then discharges to the Chehalis River. The expected flow will be a maximum of 640 gpm for each phase. The chemicals used for treatment of the cooling water will either be precipitated out of the effluent stream or will be at undetectable concentrations.

Discharges through the blowdown line and outflow structure are regulated by the NPDES permit, which will be amended to include Phase II. The cooling tower discharge will meet the limitations of the NPDES permit and will be in compliance with applicable state water quality criteria (WAC 173-201A).

**b. Ground:**

**1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

Process water will be supplied from the existing Ranney wells and transported through the existing supply water line. The Ranney wells are located on the southern bank of the Chehalis River, approximately 4 miles downriver of the plant site near the river's confluence with Elizabeth Creek. The wells penetrate to a depth of approximately 120 feet into the alluvial aquifer associated with the Chehalis River. The Ranney wells obtain approximately 88 percent of their water from the Chehalis River via drawdown, with the remaining 12 percent drawn from groundwater in the surrounding river alluvium. Water from the Ranney wells will be transported to the Satsop CT Project plant site via the existing supply water line and the existing discharge (blowdown) line. A connection between the supply water line and the blowdown line will be made in the vicinity of the WNP-5 cooling tower. At the Satsop CT Project plant site, a pipe will be connected to the blowdown line to transport process supply water to the project. The Certificate Holder is requesting an amendment to the existing SCA to allow the Phase II project to use 9.5 cfs of the Public Development Authority's (PDA's) existing permitted water right.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . .; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

The plant site is not served by a sewer system; the Project will use septic systems and leach fields for sanitary waste. On-site septic systems would be constructed and operated in accordance with the applicable state and Grays Harbor County codes. The design of the on-site septic system will include a professional engineer's report on site conditions, schedule for development, water balance analysis, overall effects of the proposed system on the surrounding area, and any local zoning requirements. The placement and design of the system will allow infiltration of effluent but inhibit its direct release to surface and/or groundwater bodies.

A solid waste contractor removes solid waste from the site for disposal at an approved and regulated landfill. The system would serve approximately 22 employees.

**c. Water runoff (including stormwater):**

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The existing SCA provides the basis for the stormwater pollution control program. Used in conjunction with the existing Erosion and Sedimentation Control Plan, the existing NPDES permit and implementing EFSEC resolutions will ensure compliance with water quality standards. The Certificate Holder currently has an approved NPDES permit that covers stormwater discharges, including stormwater discharges from the proposed plant site. In addition, the SCA addresses stormwater management during construction, and includes the following requirements:

- The project must comply with all pertinent industry standards for control of any unforeseen surface water

runoff event during construction, and must notify EFSEC of surface water runoff problems.

- The project must abide by turbidity criteria for construction-related runoff as established in the State of Washington Water Quality Standards.

Runoff from the northern portion of the site will be routed through existing ditches and culverts to the C-1 pond, which is located on Satsop Development Park property to the west. If necessary, surface water runoff from the site can be pumped through a series of ditches and culverts to the existing Equalization Pond on the main Satsop Development Park property. This pond would provide additional storage capacity during construction if surface water runoff is unusually high. The Environmental Protection Control Plan will be modified if necessary to include specifications for any commitments made for Phase II plant operations. BMPs consistent with those in the *Stormwater Management Manual for the Puget Sound Basin* (WSDOE 2000) will be employed during operation of Phase II.

At least annually, facility employees will also receive training in the pollution control laws and regulations, and the specific features of the facility, which are intended to prevent releases of oil and petroleum products.

For more information, see Supplemental Section B-3.

**2) Could waste materials enter ground or surface waters? If so, generally describe.**

Waste materials will not be able to enter ground or surface waters. Waste material during construction will be collected and disposed of in an approved manner. During operation, a power plant is not a generator of any significant quantities of waste materials. Solid waste material will be stored in buildings or work areas and disposed of in an approved manner. Liquid waste, primarily oil, will be contained in tanks within areas with impervious liners. Water runoff from areas that might have been exposed to oil will pass through an approved water/oil separator before being discharged to the retention pond. A reservoir included with the oil/water separator will collect the waste oil for off-site recycling or disposal by a licensed contractor. Large tanks containing oil will be diked and valved to "retain in place" any large oil spills for mitigation and cleanup in place.

**d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:**

Construction activities will be controlled to the extent possible to help limit erosion. Clearing, excavation, and grading will be limited to areas absolutely necessary for construction of the project. Areas outside the construction limits will be identified and clearly marked, and equipment operators will be instructed to avoid these areas. Also, certain construction activities would be limited, and temporary control structures such as sediment traps and silt fences would be installed. Generally, erosion control measures will include measures such as silt fences, diversion ditches, hydroseeding, and sediment traps. Employees at the site will be trained in the following spill response measures:

- Identifying areas that may be affected by a spill and potential drainage routes
- Reporting of spills to appropriate individuals
- Employing appropriate material handling and storage procedures
- Implementing spill response procedures

Stormwater catchbasins and detention systems will be inspected at least annually as part of the site preventive maintenance program. Stormwater catchbasins will be cleaned if the collected deposits fill more than one-third of the depth from the basin to the invert of the lowest pipe leading into or out of the basin.

Inspections will be conducted to confirm that non-permitted discharges are not entering the stormwater system. A summary of each inspection will be retained, along with any notifications of noncompliance and reports on incidents such as spills.

**4. Plants**

**a. Check types of vegetation found on the site:**

**deciduous trees:**     alder             maple  
                                  aspen             other \_\_\_\_\_

**evergreen trees:**     fir                     cedar  
                                  pine                     other \_\_\_\_\_

shrubs  
 grass  
 pasture  
 crop or grain

**wet soil plants:**     cattail                     buttercup  
                                  bullrush                     skunk cabbage  
                                  other \_\_\_\_\_

**water plants:**         water lily                     eelgrass  
                                  milfoil                       other \_\_\_\_\_

**other types of vegetation:** \_\_\_\_\_

Plant Site – none; site has been cleared for construction of Phase I.

**b. What kind and amount of vegetation will be removed or altered?**

No vegetation is currently located on the site where Phase II would be constructed; therefore, no vegetation would be removed or altered.

**c. List threatened or endangered species known to be on or near the site.**

There are no threatened, endangered, candidate, or sensitive plant species on or adjacent to the study area.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

Because the plant site was previously developed and no new utility corridors are required for Phase II, there is no vegetation on the project site and therefore no planting would occur to preserve or enhance vegetation. Selective planting of native or appropriate tree species will be undertaken along the berm adjacent to Keys Road for visual screening of the project from surrounding neighbors.

## 5. Animals

**a. Check box for any birds and animals which have been observed on or near the site or are known to be on or near the site:**

**Birds:**       hawk       heron       eagle  
 songbirds    other See Supplemental Section B-5

**Mammals:**    deer       bear       elk  
 beaver       other rodents, shrews, bats, rabbits

**Fish:**       bass       salmon       trout  
 herring       shellfish  
 other See Supplemental Section B-5

The site is currently under construction for Phase I. No birds or animals have been observed on the site since construction was started. Birds and animals have been observed in vegetated areas near the site. The checked species potentially occur within habitats traversed by the natural gas pipeline or electrical transmission lines being constructed as part of Phase I of the project, with a smaller total utilizing the area immediately adjacent to Phase II.

**b. List any threatened or endangered species known to be on or near the site.**

The USFWS, NMFS, WDNR, and WDFW were contacted for information on threatened and endangered species potentially occurring in the study area. The WDNR's Natural Heritage Data Systems were searched for documented occurrences of species of concern in the study area. Local biologists with the WDFW were contacted to confirm specific information on species of concern in the study area (USFWS 2001; WDFW 2001; Zahn 2001).

Threatened, endangered, and candidate fish species occurring or potentially occurring in the vicinity include bull trout (federal threatened), Dolly Varden (proposed federal threatened), coho salmon (federal candidate), and cutthroat trout (proposed federal threatened). Bull trout and Dolly Varden may occur in reaches of the Chehalis River adjacent to the site, but the frequency and likelihood of occurrence is low. Cutthroat trout and coho salmon are known to use both the Chehalis River and tributary streams in the site vicinity for spawning and rearing habitat. It is unlikely that these species would be significantly affected by construction activities or plant operation, as discussed in Supplemental Section B-5.

Threatened, endangered, and candidate wildlife species potentially occurring in the vicinity of the site include the bald eagle (federal and state threatened), the northern spotted owl (federal threatened, state endangered), the streaked horned lark (federal candidate, state candidate), and the western pocket gopher (federal candidate, state candidate). No bald eagles nest were found within 0.5 mile of the project site; the nearest known nests are approximately 1.5 miles northeast of the project site. No spotted owls have been detected during surveys in mature forest habitat of the Satsop Development Park project. It is unlikely that the streaked horned lark or western pocket gopher would be affected by this project.

**c. Is the site part of a migration route? If so, explain.**

Concentrations of waterfowl, including Canada geese, mallards, gadwalls, pintails, wigeons, shovelers, and teal, are defined as a state priority species. Seasonally flooded fields along the Chehalis River provide wintering habitat for over 10,000 wigeons, mallards, pintails, and buffleheads, 250 Canada geese, and 80 trumpeter swans (WDNR 1994). Numerous waterfowl were observed in flooded fields and emergent wetlands in the study area during field surveys in January 1994. Construction and operation of the project will not affect the migration of these or other migrating species.

The Chehalis River adjacent to the site is a migration route for several anadromous fish species, including chinook, coho, and chum salmon, cutthroat and steelhead trout, and potentially migratory bull trout and Dolly Varden. Resident cutthroat trout and other fish species are also likely to use this reach of the Chehalis River for migration. Construction and operation of the project will not affect migration of anadromous or resident fish species.

**d. Proposed measures to preserve or enhance wildlife, if any:**

Because the plant site was previously developed and no new utility corridors are required for Phase II, there will be no impacts to vegetation or wildlife from the construction or operation of Phase II. No direct or significant indirect impacts on aquatic habitats will result from construction or operation of Phase II, therefore no measures to preserve or enhance aquatic habitats are necessary.

## 6. Energy and Natural Resources

- a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

During construction, cranes, trucks, mobile equipment, and power tools will consume energy; similarly, energy would be used during manufacturing of the combined cycle equipment and materials necessary for constructing the new combustion turbine facility. The Phase II project would be fueled by natural gas. A small amount of diesel fuel (#2 distillate) will be on site for the backup generators and the fire-water pump. The Phase II project will contract for a firm, long-term (non-interruptible) gas supply and non-interruptible transportation.

Diesel fuel and gasoline will be used during construction to power construction machinery. During normal operation, natural gas will be used as the fuel for the facility.

- b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No.

- c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

The project is an energy conversion facility converting natural gas to electricity. The project as designed will incorporate the most efficient commercial process available for generating electricity from natural gas. The combined cycle power plant thermal efficiency is over 50 percent as compared to 25 percent to 30 percent for a conventional steam cycle power plant. Wherever possible, energy conservation and energy efficiency features are incorporated into the project design to enhance energy conversion efficiency. Heated, continuously occupied personnel spaces will be insulated per state energy codes. The facility is expected to operate at approximately 54 to 54.5 percent efficiency across the ambient temperature range, compared to 30 to 45 percent efficiency for other types of thermal plants.

## 7. Environmental health

- a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

The Certificate Holder has an existing Spill Prevention Control and Countermeasures (SPCC) Plan for Phase I of the Satsop CT Project that will also be applicable to Phase II. Revisions of the SPCC Plan and Hazardous Waste Management Procedure were most recently submitted to EFSEC in August 2001 and approved by EFSEC on September 19, 2001. Revisions are required a minimum of every 2 years, but will be made sooner to respond to changing site organizations or conditions, or changes in regulations. The revision process will include an engineer's review, an updated organizational structure, and updated procedures specifying locations and what checks need to be made.

The risk of a fire or explosion during construction of the Phase II project is considered to be extremely low. During construction, small quantities of flammable liquids and compressed gases will be stored and used, including fuels, paints, cleaning solvents, acetylene, oxygen, helium, hydrogen, and argon for welding. The potential hazards associated with use of these materials will be mitigated by following state and federal construction safety requirements.

Operation of the Satsop CT Project will require the use of two materials which can be explosive under certain conditions: natural gas and hydrogen gas. Natural gas will be the primary fuel for the facility. The natural gas will be piped into the site; none will be stored on site. Hydrogen will be used as a coolant for the electrical generator for the combustion turbines and a maximum of approximately 70,000 cubic feet will be stored.

Aqueous ammonia will be used for injection into the selective catalytic reduction (SCR) system for NOx control and will be stored on site. However, aqueous ammonia is not considered a risk in terms of explosion potential or flammability, as it is composed of 70 percent water and will be stored separately from non-compatible materials in compliance with fire safety regulations.

The risk of an explosion in the Phase II facility will be mitigated by designing, constructing, and operating the facility as required in the latest versions of the applicable codes, regulations, and consensus standards.

The Phase II project will be operated by qualified personnel using written procedures that provide clear instructions for safely conducting activities involved in the initial startup, normal operations, temporary operations, normal shutdowns, emergency shutdowns, and subsequent startups. The procedures for emergency shutdowns will include the conditions under which emergency shutdowns are required, and the assignment of shutdown responsibilities to qualified operators to ensure that shutdowns are done in a safe and timely manner. Also covered in the procedures will be the consequences of operational deviations and the steps required to correct or avoid the deviations.

Before being involved in operating the Phase II facility, employees will be presented with a facility plan, including a health and safety plan, and will receive training regarding the operating procedures and other requirements of safe operation of the plant. In addition, employees will receive annual refresher training, which will include testing of their understanding of the procedures. Training and testing records will be maintained. To provide an early warning of a gas release, detectors will be installed for flammable gases and ammonia. Flammable gas detectors will monitor the work areas, and detectors will activate an alarm if the gas concentration reaches 20 percent of the lower explosive limit. If a hazardous concentration of gas is detected, the gas supply will be shut off and the work area evacuated.

A hazardous materials emergency response program will be implemented for Phase II, as will be done for Phase I. Satsop CT Project emergency responders trained and equipped to the technician level will be available at all times when Phase II is in operation. The emergency responders will use a written emergency response plan developed for Phase I and expanded to include Phase II.

The existing SPCC Plan describes the oil, fuel, and hazardous material storage facilities; reporting systems; prevention requirements; and spill response procedure. The Hazardous Waste Management Procedure establishes a program for the handling, storage, and disposal of wastes from the Satsop site.

**1) Describe special emergency services that might be required.**

Assistance from the fire department/emergency medical services would be requested in the unlikely event of a fire during construction or operation or release of hazardous chemicals during equipment maintenance.

The Emergency Plan, which was approved by EFSEC on September 19, 2001, applies to all project personnel and provides the guidelines necessary to ensure timely notification and rapid response in the event of emergencies occurring on the property. Specific emergency modification procedures include contacting the following agencies:

- Fire Emergency
  - 911 (response will be by the Satsop or Elma Fire Departments)
- Medical Emergency
  - On-site personnel
  - Elma Fire Department if transport by ambulance required
  - If on-site fatality, Grays Harbor County sheriff contacted
- Bomb Threat Emergency
  - Grays Harbor County Sheriff
- Demonstration Emergency
  - Grays Harbor County Sheriff
- Hazardous Materials Accidents
  - Energy Facility Site Evaluation Council
  - Department of Ecology

Others who could be notified include National Response Center and Elma Fire Department.

**2) Proposed measures to reduce or control environmental health hazards, if any:**

The risk of an explosion in the Phase II facility will be mitigated by designing, constructing, and operating the facility as required in the latest versions of the applicable codes, regulations, and consensus standards (see Section 7(a) above).

- During construction, dangerous materials will be stored, handled and disposed of in accordance with a hazardous materials management plan.

- As noted above, all equipment will be designed, constructed and operated in accordance with applicable federal, state and local codes that relate to electrical generation facilities.
- All equipment that poses environmental health or safety risks will be enclosed in access-controlled buildings or fenced enclosures. Access to these areas will be limited to staff trained in the safe operation and maintenance of the enclosed equipment.
- Physical contact with high-voltage electrical gear and resulting electric shock hazard will be reduced or eliminated. All high-voltage equipment will be placed within fenced enclosures to eliminate access by untrained and/or unauthorized individuals. Warning signs will also be prominently posted.
- Hazardous materials used in operations and maintenance will be stored in appropriate enclosures and used and disposed in accordance with state/federal requirements.

**b. Noise**

**1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

Existing noise sources would not affect the project.

**2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Areas adjacent to the proposed project will be exposed to construction sounds produced by typical construction equipment and activities. Despite inclusion of mitigation measures described in Section 7 (b) (2), areas adjacent to the project will be exposed to increased sound levels during active periods of construction. This will be a short-term impact. The Certificate Holder will notify nearby residents in advance of the anticipated schedule for construction activities.

The power plant would operate continuously, 24 hours per day. The plant would be designed to ensure compliance with state noise limits. The predicted noise contribution from Phase II would exceed maximum allowable contribution at the east side of the property, where there are no residences or commercial structures (see Table B-7-4 in Supplemental Section B-7). However, as with Phase I, the Certificate Holder is negotiating an agreement under which the neighboring property owner, (Grays Harbor Public Development Authority) has consented to noise levels in excess of the otherwise-applicable 70-dBA noise limit.

Predicted sound levels would range from 37 to 75 dBA. A further discussion of project noise is included in Supplemental Section B-7.

**3) Proposed measures to reduce or control noise impacts, if any:**

- Construction will not be performed within 1,000 feet of an occupied dwelling unit on Sundays, legal holidays, or between the hours of 10:00 P.M. and 6:00 A.M. on other days.
- All construction equipment will have sound control devices no less effective than those provided on the original equipment. Equipment will not be operated with unmuffled exhaust systems.
- Pile driving or blasting operations, if required, will not be performed within 3,000 feet of an occupied dwelling unit on Sundays, legal holidays, or between the hours of 8:00 P.M. and 8:00 A.M. on other days.
- Despite inclusion of the measures described above, areas adjacent to the project will be exposed to increased sound levels during active periods of construction. This will be a short-term impact. The Certificate Holder will notify nearby residents in advance of the anticipated schedule for construction activities.
- Major sources of sound will be located inside an acoustically treated building or structure.

- Acoustically absorptive silencers will be installed on the combustion turbine inlet system, enclosure ventilation systems, and emergency relief valves.
- Separate acoustical enclosures will be installed for major noise sources, including the combustion turbine and generator.
- Acoustically absorptive insulation will be installed in duct walls of the combustion turbine inlet air and exhaust systems.

A discussion of planned mitigation of noise emissions is attached as Supplemental Section B-7.

## **8. Land and Shoreline Use**

### **a. What is the current use of the site and adjacent properties?**

Phase II will be located within the approved Satsop Combustion Turbine (CT) Project site. Phase I is currently under construction and is expected to be in operation by late 2003. The site is surrounded on all sides by the property boundary of the Satsop Development Park. The approximately 22-acre site was previously developed for and used as a laydown area during construction of now discontinued nuclear plants WNP-3 and WNP-5 located at the Satsop Development Park.

Prior to the start of site work for Phase I, most of the site was covered by a layer of graded gravel several feet deep and surrounded by a chainlike fence topped with barbed wire. The western portions of the site adjacent to Keys Road have been paved with asphalt.

To the south of the site, the Bonneville Power Administration (BPA) maintains a transmission corridor as part of its Olympia-to-Aberdeen grid connection. Most of the other areas surrounding the site are forested. About a quarter mile to the southwest of the site, the Weyerhaeuser Timber Company manages an experimental forest that is approximately 50 acres in size. On the north side of this forest, about two-thirds of a mile west-southwest of the site, are about a dozen single-family houses. To the southeast of the site is the Fuller Creek preservation area. The discontinued nuclear power plant facilities (WNP-3 and WNP-5) lie beyond this area, approximately 1 mile south and southeast of the project site. Forested areas are located to the north of the site, beyond which the grade drops rapidly down toward the Chehalis River, which is approximately 0.5 mile from the project site.

**b. Has the site been used for agriculture? If so, describe.**

While the site may have been used in the past for agriculture, the site has been cleared and used as a construction laydown area since the initiation of construction for the Satsop Nuclear Plants in 1976. No agricultural activities have taken place since that time.

**c. Describe any structures on the site.**

There are no structures on the site. The site is currently being used as a construction laydown area for Phase I.

**d. Will any structures be demolished? If so, what?**

No structures to be demolished.

**e. What is the current zoning classification of the site?**

The project site is located within areas having Grays Harbor County's Industrial (I-2) zoning designation (13.06.080). This designation permits "...industrial uses and activities involving the processing, handling and creating of products and research and technological processes." Industrial development facilities and transportation and utility facilities are permitted uses within the I-2 zoning classification (13.06.090).

The project is consistent with local Grays Harbor County land use plans, with respect to siting of electrical generation plants. In Grays Harbor County, development of electrical power plants in an I-2 zone is permitted outright.

**f. What is the current comprehensive plan designation of the site?**

The proposed Phase II project site is located within the Rural Lands designation contained in the Rural Lands Element of the Comprehensive Plan. The Rural Lands Element provides the policy foundation to guide the county in allocating land for commercial and industrial uses, and also to protect the resources of the county's rural lands.

**g. If applicable, what is the current shoreline master program designation of the site?**

The site is not within the shoreline master program jurisdiction; therefore, it is not applicable.

**h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

No part of the site has been classified as an "environmentally sensitive" area.

**i. Approximately how many people would reside or work in the completed project?**

Operation of the project would involve approximately 22 employees working either two 12-hour shifts or three 8-hour shifts, with a maximum of 26 employees working on site at any time.

**j. Approximately how many people would the completed project displace?**

None.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

None required.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The plant site is currently zoned Industrial (I-2), a zoning designation that allows this use. In addition, the project site is located within an industrial park. Electrical power production as an industrial activity will be compatible with both the planned use and zoning of the Phase II site. See Section 8(f) above.

**9. Housing**

**a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

No housing units are planned to be developed by the project either on the Phase II site or elsewhere. Phase II will generate approximately 22 additional jobs, as well as secondary jobs created as a result of the direct economic impact of operation of Phase II. Efforts would be made to hire local individuals to staff the project as much as practicable. Operation employees would likely choose to reside in various areas from Aberdeen to Olympia, based on an approximately 40-minute drive to work. Even if all 22 employees come from outside of the local area, and they all bring

families, the potential impact area is sufficiently large that the project would not have an adverse impact on population or housing in the area. Workers new to the local area are expected to obtain housing from the existing local housing stock.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

No housing units would be eliminated by the development of Phase II.

- c. Proposed measures to reduce or control housing impacts, if any:**

Since total permanent direct employment at the Phase II facility will be approximately 22, and some individuals employed by the project are expected to already reside in the local area, no impact to housing is expected.

## **10. Aesthetics**

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The tallest structure at the Phase II facility will be the emission stack which will have an elevation of 200 feet above ground level. The principal exterior building material will be painted metal.

- b. What views in the immediate vicinity would be altered or obstructed?**

Phase II will consist primarily of low-profile buildings and structures, with the exception of the emission stacks. Visual impacts of the constructed Phase II project upon the existing regional landscape (see Figure B-10-4 in Supplemental Section B-10) are expected to be "minor adverse, not significant." Even though project buildings and ancillary facilities would not be seen, a small portion of the emission stacks may be visible from some viewpoints in the Chehalis River Valley. The cooling towers, juxtaposed against the horizontal profile of the background hills, are objects of attention for viewers looking across the open plain of the Chehalis River Valley. If visible, the presence of small portions of the emission stacks will be an additional, but minor, element to the west of the existing and taller cooling towers of WNP-3 and WNP-5. Depending on the time of year and weather conditions, attention to the stacks could be more pronounced when a vapor plume is present.

**c. Proposed measures to reduce or control aesthetic impacts, if any:**

The Phase II will be constructed on an industrialized, developed site as part of the Satsop Combustion Turbine project. There are few nearby residences and few travelers using the adjacent Keys Road. The Phase II project will be located further east of the Phase I project. A screening berm is being built between the power plants and Keys Road as part of the Phase I construction, with a 25-foot-high noise wall behind the berm. This berm and noise wall will screen the plant from viewers using Keys Road, and will screen all but the tallest portions of the plants from viewers at nearby residences. Equipment enclosure buildings and exterior tanks will be painted beige and gray to reduce contrasts. The 200-foot-high emission stack will be painted a light color.

**11. Light and Glare**

**a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**

The proposed Phase II project would not significantly increase the existing light and glare conditions. The Phase II project would be illuminated at the same times and illumination levels as the existing Phase I plant. For more information, see Supplemental Section B-10.

**b. Could light or glare from the finished project be a safety hazard or interfere with views?**

Light and glare impacts upon nearby residents and travelers along Keys Road are expected to be insignificant. Prior to the start of construction of Phase I, there were existing high-mast lights providing wide-area illumination of the industrial yards. Local residents are already used to this local light source and the separation distance of approximately 3,375 feet provides a buffer zone for light falloff. The 25-foot-high wall with a vegetated berm located along Keys Road will reduce the light from the Phase II project. Vegetation located on the berm and scattered existing vegetation between the project site and residences would screen most of the lights. Additional screening is provided by high trees located along the residential road since the residences are set back an estimated 50 to 75 feet. In specific locations where glare or light spillover would impact Keys Road or be obtrusive to nearby residences, lighting angles could be adjusted to minimize glare impacts, or supplemental light shields/vegetation could be used for extra screening.

**c. What existing off-site sources of light or glare may affect your proposal?**

Off-site light sources are not expected to affect power production operations. See Section 11(d) below.

**d. Proposed measures to reduce or control light and glare impacts, if any:**

The 25-foot-high noise wall, vegetation located on the berm, and scattered existing vegetation between the project site and residences will screen most of the lights. Additional screening is provided by high trees located along the residential road since the residences are set back an estimated 50 to 75 feet. In specific locations where glare or light spillover would impact Keys Road or be obtrusive to nearby residences, lighting angles could be adjusted to minimize glare impacts, or supplemental light shields/vegetation could be used for extra screening.

**12. Recreation**

**a. What designated and informal recreational opportunities are in the immediate vicinity?**

The proposed Phase II project is an expansion of the existing Phase I project and is located within the same site boundaries; as a result, Phase II would have no additional recreation impacts. No recreational opportunities currently exist on or in the immediate vicinity of the site.

**b. Would the proposed project displace any existing recreational uses? If so, describe.**

Development of Phase II would not displace any existing recreational uses.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

No impacts to recreational resources are expected and no mitigation is necessary.

### 13. Historic and Cultural Preservation

- a. **Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

There are no places or objects listed on, or proposed for, national, state or local preservation registers on or next to the site. A cultural resources survey was performed as part of permitting for Phase I. The proposed Phase II project is an expansion of the existing Phase I project and is located within the same site boundaries; as a result, Phase II would have no additional historic and cultural preservation impacts.

- b. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

No significant resources are present in the proposed project area.

- c. **Proposed measures to reduce or control impacts, if any:**

No impacts to cultural resources are expected and no mitigation is necessary (unless due to justification). Should any resources be identified during site excavation, work will halt until appropriate consultation with state and tribal officials has been made and a plan approved for the disposition of the resources.

### 14. Transportation

- a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

Figure A-11-4 shows the major roadways in the area. State Route (SR) 12 is the predominant highway serving the plant site. SR 12 is a four-lane divided highway providing east-west access that extends from Aberdeen on the west to its intersection with SR 8 near Elma, then southeasterly to connect with Interstate 5 (I-5) north of Centralia. SR 8 continues east from Elma until it becomes US Highway 101 and connects to I-5. South of SR 8, SR 12 continues as a two-lane highway with varying width shoulders. The posted speed limit on SR 12 is 60 mph in the Elma to Montesano area.

Keys Road is a two-lane minor collector county arterial providing direct connection to the plant site and proposed project site. Keys Road is

24 feet in width with varying width shoulders (paved or gravel) and is stop sign controlled (one way on Keys Road) at its intersection with SR 12.

Access to the site is provided directly from Keys Road by a new access driveway to be constructed within the site boundaries. The asphalt surface of Keys Road is in good condition, and the posted speed limit is 35 to 40 mph. The proposed plant site is located approximately 2.5 miles south of SR 12 along Keys Road.

The Wakefield Road corridor provides access from the east to the project site. Wakefield Road connects SR 12 to Keys Road via Lambert Road and is rated for heavy vehicle (truck) use. Wakefield/Lambert Road is two lanes and the speed limit is 45 mph.

**b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

Grays Harbor Transit Bus route 40 currently operates along SR 12 providing service between Olympia and Aberdeen. This route operates six times a day on weekdays and three times a day on weekends.

**c. How many parking spaces would the completed project have? How many would the project eliminate?**

No parking spaces would be eliminated by the project. Approximately 41 parking spaces will be provided at the plant site and additional parking will be provided at the construction laydown area located on the west side of Keys Road. This amount of parking will be sufficient for the maximum of 26 employees who will be on the site during full operation of both plants.

**d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

Neither construction nor operation will require new roads or improvements to existing roadways.

**e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

Items shipped by rail will be delivered to the existing Elma rail siding located approximately 3 miles northeast of the site. The existing facilities are adequate for project-related needs, and there is no need to develop additional rail access or rail facilities for the project. Shipment by rail will require approximately 25 to 30 railcars over a 3- to 6-month period for

materials to construct the project. The project will not use waterborne or air transport during construction or operation, with the exception of personnel transport on commercial flights and the use of commercial couriers that would use existing private or commercial flights for occasional small deliveries.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

Phase II construction will add approximately 57 P.M. peak hour trips to the trips generated by construction of Phase I but will not change the level of service (rated F) northbound at Keys Road, assuming overlapping construction of the two plants. It is anticipated that 326 additional P.M. peak hour trips will be attributable to the construction of Phases I and II. Traffic impacts related to the construction of Phase I have already been accepted; trips associated with Phase II will be mitigated for. Operation of Phase II would add approximately 50 vehicular trips per day for approximately 22 full-time permanent employees plus other deliveries. Approximately 22 trips would occur during A.M. or P.M. peak hours.

- g. Proposed measures to reduce or control transportation impacts, if any:**

EFSEC has approved the Certificate Holder's traffic control plan implemented for the Phase I construction. This plan was prepared in accordance with a letter from Grays Harbor County's Department of Public Works dated July 2, 2001. The plan is also applicable to the Phase II construction.

## **15. Public Services**

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

Because no extensive demand on any public service or utility is anticipated, and a traffic control plan will be implemented, the overall impact to the public services and utilities attributable to construction is expected to be minor and short-term. Operation of the Satsop CT Project will not have a significant adverse impact on existing public services in the project vicinity. Satsop CT staff will receive appropriate training in handling on-site emergencies, including fire and medical, and will provide the first line of response. As part of Phase I construction, the Certificate Holder has initiated consultation with the local fire departments concerning training,

equipment and plant familiarity. This consultation will be expanded to include Phase II. Because there will be a relatively small staff operating the Satsop facility, no effect on schools in the project vicinity is expected. The Satsop CT Project will include a septic system and leach field for each plant. These will be constructed and operated in accordance with applicable regulations and will not affect the existing septic systems.

**b. Proposed measures to reduce or control direct impacts on public services, if any.**

Significant impacts on public services are not anticipated. Therefore, the project does not include design features associated with potential impacts to public services.

**16. Utilities**

**a. Check utilities currently available at the site:**

- electricity       natural gas       water  
 refuse service       telephone       sanitary sewer  
 septic system       other \_\_\_\_\_

Electricity and water are currently available at the site. As part of Phase I construction, natural gas, refuse service, and septic services will be available at the site. Sanitary sewer service is not available.

**b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

No new utility corridors are required for Phase II.

**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

SIGNATURE \_\_\_\_\_

Date Submitted: December 19, 2001

## MITIGATED DETERMINATION OF NONSIGNIFICANCE

### WAC 197-11-970 Determination of Nonsignificance (DNS)

#### ***Description of proposal:***

Duke Energy Grays Harbor, LLC, and Energy Northwest (referred to collectively as the Certificate Holder) is proposing to expand the existing Satsop Combustion Turbine (CT) Project by constructing and operating a second phase similar to the permitted Phase I facility. As with Phase I, Phase II will consist of a combined-cycle plant and will generate approximately 650 MW to supply growing regional electrical demand. Phase II will be constructed on the Satsop CT Project site. A Site Certification Agreement (SCA) (Application 94-1) was previously approved by the State of Washington. Phase II will be entirely within the boundaries of the previously permitted site. As a result, the Certificate Holder is applying to the Energy Facility Site Evaluation Council (EFSEC) for an amendment to the existing SCA to allow construction and operation of Phase II. This amendment is the fourth amendment to the SCA that was originally issued for the Satsop nuclear power plants.

#### ***Proponent:***

Duke Energy Grays Harbor, LLC, and Energy Northwest

#### ***Location of proposal, including street address, if any:***

The approved site is located south of the Chehalis River near the town of Elma (see Figure A-11-1 in Supplemental Section A-11). The 1600-acre Satsop Development Park surrounds the site on all four sides. The site is located approximately 0.5 mile southwest of the river. Fuller Creek is approximately 0.5 mile to the east, and Workman Creek is located approximately 2 miles to the east.

The site is currently under construction for Phase I. To the north and northwest of the proposed site are various field offices, storage buildings, and stockpiled building materials (see Figure A-11-2 [Project Site] in Supplemental Section A-11). Similar items and facilities are located on the west side of the existing laydown area west of Keys Road. To the south and east, respectively, are the BPA transmission line right-of-way and a strip of forested land. A fire water tank and pump house are located in the northeast corner of the laydown area adjacent to the proposed site.

As part of the construction of Phase I, the site has been cleared of structures, discarded construction materials, and unneeded utilities. No additional clearing is required for Phase II construction.

The existing transmission line corridor from the plant site to the BPA substation is shown on Figure A-11-3 (in Supplemental Section A-11). This corridor contains two high-voltage

transmission lines and one distribution line and is maintained with only grass and low vegetation except within the Fuller Creek drainage channel. The creek is incised approximately 120 feet below the surrounding ground surface, and there is a small concrete and rock dam and drain pipe within the creek in the right-of-way.

Phase II's gas supply will be provided by the natural gas pipeline being constructed for Phase I. No additional pipelines are required for Phase II.

**Address of property involved:**

401 Keys Road, Satsop, Washington.

**Lead agency:**

The lead agency of this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2) (c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

- There is no comment period for this DNS
- This DNS is issued under 197-11-340 (2); the lead agency will not act on this proposal for 15 days from the date below. Comments must be submitted by: \_\_\_\_\_

**Responsible official:**

Position/Title: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**(OPTIONAL)**

You may appeal this determination to (name): \_\_\_\_\_

at (location): \_\_\_\_\_ no later than (date): \_\_\_\_\_

by (method): \_\_\_\_\_

You should be prepared to make specific factual objections.

Contact \_\_\_\_\_ to read or ask about the procedures for SEPA appeals.

There is no agency appeal

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