

**AMENDED**  
**SITE CERTIFICATE**  
**FOR THE**  
**KLAMATH COGENERATION PROJECT**  
Includes Amendment No. 1

This Amended Site Certificate for the Klamath Cogeneration Project (KCP or Facility) is issued and executed in the manner provided by ORS Chapter 469, by and between the State of Oregon (State), acting by and through its Energy Facility Siting Council (EFSC or Council), and the City of Klamath Falls, Oregon (City).

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this Amended Site Certificate are set forth in the Council's Final Order for the KCP Application for Site Certificate (dated November 6, 1996) which was granted on August 15, 1997, and the Council's Final Order for the KCP Request for Amendment (dated October 6, 1997) which was granted on April 17, 1998 (collectively the "Final Orders") and which by this reference are incorporated herein.

In interpreting this Amended Site Certificate, any ambiguity will be clarified by reference to, and in the following priority, this Amended Site certificate, the Final Order granted on April 17, 1998 for Amendment No. 1 to this Amended Site Certificate, the Final Order granted on August 15, 1997 for the Application for Site Certificate, the 500 Megawatt Exemption Final Order, and if necessary the record of the proceedings which led to those Orders.

The terms used in this Amended Site Certificate shall have the same meaning set forth in ORS 469.300 and Oregon Administrative Rules (OAR) 345-01-010, except where otherwise stated or where the context clearly indicates otherwise. "Office" means the Office of Energy within the Oregon Department of Consumer and Business Services (DCBS).

**I. SITE CERTIFICATION**

- A. To the extent authorized by State law and subject to the conditions set forth herein, the State approves and authorizes the City to construct, operate and retire a natural gas-fired combustion turbine cogeneration Energy Facility, together with certain Related or Supporting Facilities, at the Site as described in section II of this Amended Site Certificate, near Klamath Falls, Oregon. ORS 469.401(1).
- B. This Amended Site Certificate shall be effective until it is terminated pursuant to OAR 345-27-110, or the rules in effect on the date that termination is sought, or until the Amended Site Certificate is revoked pursuant to ORS 469.440 and OAR 345-29-100, or the statutes and rules in effect on the date that revocation is ordered. ORS 469.401(1)
- C. This Amended Site Certificate does not address, and is not binding with respect to, matters which were not addressed in the Council's Final Order. These matters include but are not limited to: building code compliance, wage, hour and other labor regulations, local government fees and charges, and other design or operational issues that do not relate to siting the Facility (ORS 469.401(4)); and permits issued under statutes and rules for which the decision on compliance has been delegated by the Federal government to a state agency other than the Council. 469.503(3). Some of these are identified in section V. of this Amended Site Certificate.
- D. Both the State and the City shall abide by local ordinances and state law and the rules of the Council in effect on the date this Amended Site Certificate is executed. ORS 469.401(2). In addition, upon a clear showing of a significant threat to the public health, safety or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules. ORS 469.401(2).
- E. For a permit, license or other approval addressed in and governed by this Amended Site Certificate, the City shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules. ORS 469.401(2).

- F. Subject to the conditions herein, this Amended Site Certificate binds the State and all counties, cities and political subdivisions in this State as to the approval of the Site and the construction, operation and retirement of the Facility as to matters that are addressed in and governed by this Amended Site Certificate. ORS 469.401(3).
- G. Each affected state agency, county, city and political subdivision in Oregon with authority to issue a permit, license or other approval addressed in or governed by this Amended Site Certificate shall, upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this Amended Site Certificate. ORS 469.401(3).
- H. After issuance of this Amended Site Certificate, each state agency or local government agency that issues a permit, license or other approval for the KCP shall continue to exercise enforcement authority over such permit, license or other approval. ORS 469.401(3).
- I. After issuance of this Amended Site Certificate, the Council shall have continuing authority over the Site and may inspect, or direct the Office to inspect, or request another state agency or local government to inspect, the Site at any time in order to assure that the Facility is being operated consistently with the terms and conditions of this Amended Site Certificate. ORS 469.430.

**II. DESCRIPTION OF THE FACILITY AND SITE**

In the event of a conflict between the descriptions of the Facility in this Amended Site Certificate and the Council's Final Orders, this Amended Site Certificate shall control.

A. Description of the Amended Facility

A.1. The Energy Facility

The Energy Facility is a combined-cycle, combustion turbine (CT)

cogeneration facility, which may be based on one (single CT) or two (two CT) combustion turbines. Unless otherwise indicated, the approximate sizes and capacities discussed in this Amended Site Certificate are for the two combustion turbine alternative.

### Major Structures and Equipment

The single CT Energy Facility will be capable of producing 318 megawatts (net) of electricity at Site conditions when providing zero pounds per hour of steam to off-site industrial use. The two CT Energy Facility will be capable of producing up to 500 megawatts (net) of electricity at site conditions when providing zero pounds per hour of steam to off-site industrial use. The combustion turbines will burn only natural gas. The auxiliary boiler will burn primarily natural gas, but may burn low-sulfur oil as a backup fuel. The on-site emergency diesel generator will burn low-sulfur oil. The estimated life of the Energy Facility is at least 30 years. The single CT Energy Facility is shown in the ASC, Fig. B-3, and the two CT Energy Facility is shown in the RFA, Fig., B-3, both of which are included in this Amended Site Certificate as appendix A.

The single CT Energy Facility consists of three major pieces of equipment: one combustion turbine, one heat recovery steam generator (HRSG), and one steam turbine generator. The two CT Energy Facility consists of five major pieces of equipment: two CTs, two HRSGs, and one steam turbine generator.

The Energy Facility (either the single CT or the two CT alternative) includes a turbine generator building about 70 feet tall and related structures; one or two HRSGs that are approximately 110 feet tall; one or two HRSG emission stacks that are approximately 150 feet tall; a mechanical evaporation cooling tower about 50 feet tall; an auxiliary boiler with an exhaust stack that is about 125 feet tall; an approximately 30-foot-high, above-ground 200,000 gallon fuel oil storage tank; an electrical substation with outdoor transformers and switches; an approximately 125,000 square-foot stormwater retention/evaporation pond; on-site parking; and a variety of storage tanks and other structures.

The Energy Facility (either the single CT or the two CT alternative) includes four major systems: the power generation system, the cycle cooling system, the control system, and the electric and transmission system.

The power generation system includes three primary components: the combustion turbine generator(s), the HRSG(s), and the steam turbine generator.

The cycle cooling system includes a water-cooled steam surface condenser, an evaporative mechanical induced draft cooling tower consisting of four cells for the single CT alternative and six or seven cells for the two CT alternative, boiler and cooling tower water chemical treatment systems, and a component cooling system.

The control system includes distributed control systems, an uninterruptible power supply, and an instrument air system.

The electric and transmission system includes an electric power system and a 230 kV electric transmission line to the Pacific Power & Light (PP&L) Klamath Falls substation.

The Energy Facility also includes NO<sub>x</sub> control systems, a continuous emissions monitoring system, a fire protection system, water treatment systems and a stormwater drainage system.

#### Capacity and Output

The Energy Facility is authorized to have a nominal electric generating capacity of up to 500 MW (net) at annual average Site conditions with no steam to off-site industrial use and using natural gas as the fuel.

The expected ratings for the single CT Energy Facility at annual average conditions (48 degrees F) adjusted to Site elevation are (See ASC, Exhibit B, p. 11, November 6, 1996):

Gross power output is estimated to be about 328 MW at zero steam to off-site industrial use, 315 MW at 143,400 pounds per hour of steam to off-site industrial use, and 310 MW at 200,000 pounds per hour of steam to off-site industrial use. Minimum

expected gross generation is 157 MW based on 315 MW gross output.

Net power output is estimated to be about 318 MW at zero

steam to off-site industrial use, 305 MW at 143,400 pounds per hour of steam to off-site industrial use, and 300 MW at 200,000 pounds per hour of steam to off-site industrial use.

The expected ratings for the two CT Energy Facility at annual average conditions (48 degrees F) adjusted to Site elevation are (see RFA, Exhibit B, p.B-6, Footnotes 1 and 2):

Gross power output is estimated as approximately 474 MW at zero steam to off-site industrial use, and 453 MW at 200,000 pounds per hour of steam to off-site industrial use.

Net power output is estimated as approximately 464 MW at zero steam to off-site industrial use, and 443 MW at 200,000 pounds per hour of steam to off-site industrial use.

The Energy Facility will be designed to achieve a capacity factor in excess of 93 percent. Actual capacity factor will depend on dispatch of the Energy Facility, operating and maintenance considerations, and other factors. The forced outage rate for the Energy Facility is expected to be about two percent.

The Energy Facility will be designed to operate as a dispatchable facility capable of stable operation from at least 50 up to 100 percent of its rated output and with multiple starts.

#### Water Use

The Energy Facility will reuse treated effluent from the City of Klamath Falls' Spring Street Wastewater Treatment Plant (SSWTP) for its major source of water. This water will be used in the cooling tower system for evaporative cooling. The single CT Energy Facility is estimated to use about 1,211 gallons per minute (gpm) (about 1.74 million gallons per day) of treated effluent on an annual average basis. The two CT Energy Facility is estimated to use up to about 2,325 gallons per minute (gpm)(about 3.35 million gallons per day) of treated effluent on an annual average basis. (For the single CT Energy Facility, see January 2, 1997 letter from RMI to the Office, page 2 and Figures B-1 and F-1, which are in appendix D to this Amended Site Certificate; for the two CT Energy Facility, see the RFA, Exhibit O, Table O-1, which is in appendix C to this Amended

Site Certificate.)

The Energy Facility will obtain good quality water from the City of Klamath Falls' existing municipal water supply system. The Energy Facility (either the single CT or the two CT alternative) is estimated to use about 160 gpm (about 0.23 million gallons per day) of this water on an annual average basis.

The Energy Facility will obtain good quality water from Collins to make steam for Collins. The Energy Facility (either the single CT or the two CT alternative) is estimated to use about 400 gpm of Collins' water on an annual average basis. This water will reduce by an equal amount the amount of water that Collins uses to make its own steam. Of the 400 gpm, about 200 gpm will be condensed steam and about 200 gpm will be from a Collins' groundwater well.

The Energy Facility will dispose of its wastewater (both process wastewater and sanitary wastewater) to the SSWTP. The single CT Energy Facility is estimated to produce about 444 gpm (about 0.64 million gallons per day) of wastewater on an annual average basis. The two CT Energy Facility is estimated to produce up to about 695 gpm (about 1.0 million gallons per day) of wastewater on an annual average basis.

#### A.2. Related or Supporting Facilities

The Related or Supporting Facilities for the amended KCP are the same as those for the KCP as originally approved in August 1997. The Facility will include the following Related or Supporting Facilities:

A steam pipeline to carry steam from the Energy Facility to the Collins plant and a pipeline to return condensed steam and water to the Energy Facility. The steam pipeline will be above ground, about 18 inches in diameter and about a mile long. The return pipeline will be above ground, about six inches in diameter and about one mile long.

A natural gas interconnection with Pacific Gas Transmission Company's recently built Medford Lateral natural gas pipeline which crosses Collins property adjacent to the Energy Facility Site. The interconnection will be about 12 inches in diameter and less than 300 feet long.

A new 230 kilovolt ("kV") electric transmission line from the Energy Facility to the PP&L Klamath Falls substation. The line will be about four miles long. It will consist primarily of H-frame wood pole structures about 75 feet high, but may include some single-pole steel structures about 95 feet high. Taller structures might be required under special conditions such as highway crossings, angle points or to address property owner concerns. The single-pole steel structures will be a brownish color with a non-reflective surface.

A new underground pipeline to supply cooling water to the Energy Facility. The pipeline will carry treated wastewater from the Klamath Falls Spring Street Wastewater Treatment Plant. It will be about 14 to 16 inches in diameter and about six miles long.

A new underground pipeline to return wastewater from the Energy Facility to the City's existing sewer system. This line will be about eight inches in diameter and about two miles long.

A new underground water line to supply good quality water to the Energy Facility from the City's existing water system. This line will be about six inches in diameter and about two miles long.

## B. Location of the Facility

The locations of the Energy Facility and the Related or Supporting Facilities for the amended KCP are the same of those for the KCP as originally approved in August 1997.

### B.1. The Energy Facility Site

The Energy Facility Site is about one-half mile west of the U.S. Highway 97 bridge over the Klamath River. It is on about 15 acres of land owned by Collins Products. The Site is within Klamath County and is outside the City limits and the Urban Growth Boundary. The Site is in Section 18 of Township 39 South, Range 9 East, in Klamath County, Oregon. The location of the Facility is shown in the ASC, Fig. C-1 which is included in this Amended Site Certificate as appendix B.

### B.2. Related or Supporting Facility Sites

The routes of the Related or Supporting Facilities are shown in the ASC, Fig C-1 which is included in this Amended Site

Certificate as appendix B.

The route of the steam and condensate return pipelines is entirely on land owned by Collins. It runs between the Energy Facility and the Collins plant to the southwest. It is within Section 18 of Township 39 South, Range 9 East, and Sections 13 and 24 of Township 39 South, Range 8 East.

The route of the natural gas interconnection is entirely on Collins property. It is immediately south of the Energy Facility. It is within Section 18 of Township 39 South, Range 9 East.

The route of the new 230 kV electric transmission line runs north and east from the Energy Facility Site across Heavy Industrial zoned land, continues north between Highway 97 and the Stewart Lennox subdivision, crosses Highways 66 and 140, travels northwest in the Highway 140 right-of-way and then continues north until it reaches an existing PP&L transmission line (Line 59) which runs east and west. At this point the new line turns east and runs parallel to the southern side of the existing PP&L Line 59 until it reaches PP&L's Klamath Falls substation northeast of Memorial Park. The line is within Sections 18, 7 and 8 of Township 39 South, Range 9 East.

The route of the underground cooling water supply pipeline begins at the City of Klamath Falls Spring Street Wastewater Treatment Plant. Within City limits, the route is within existing City street rights-of-way. It crosses the Link River attached to the underside of an existing bridge near the north end of Lake Ewauna. Upon leaving City limits, the route follows an existing roadway corridor. Near Memorial Park, it follows an existing City sewer force main easement to Highway 97 and then runs within Highway 97 right-of-way until it reaches Collins property. From this point it crosses Collins property to the Energy Facility Site. The route is within Sections 32 and 33 of Township 38 South, Range 9 East, and Sections 5, 8, 7 and 18 of Township 39 South, Range 9 East.

The entire length of the route of the underground wastewater return pipeline is next to the cooling water supply pipeline. It begins at the Energy Facility, crosses Collins property and joins Highway 97 right-of-way just north of the bridge across the Klamath River. From there it follows Highway 97 right-of-way north to the intersection with Highway 66. Near

the Highway 66 intersection, it connects into the City's existing sewer force main. It is within Sections 18 and 7 of Township 39 South, Range 9 East.

The route of the underground potable water line begins at an existing City potable water main near the intersection of Highway 66 and Weyerhaeuser Road. The route is within existing county street rights-of-way from Highway 66 along Weyerhaeuser Road until it reaches Collins property. It then goes east across Collins property to the Energy Facility Site. It is within Section 13 of Township 39 South, Range 8 East, and Section 18 of Township 39 South, Range 9 East.

### **III. CONDITIONS REQUIRED BY COUNCIL RULES**

The following conditions in this Amended Site Certificate are specifically required by OAR 345-27-020 (Mandatory Conditions in Site Certificates), OAR 345-27-023 (Site Specific Conditions), OAR 345-27-028 (Monitoring Conditions), OAR 345-24-060 (Public Health and Safety Standards for Pipelines), OAR 345-24-090 (Design Standards for Transmission Lines) and in OAR 345, division 26 (Construction and Operation Rules for Facilities) to address Facility and site-specific conditions and requirements.

These conditions shall apply in addition to, and should be read together with, the additional specific conditions in section IV of this Amended Site Certificate to ensure compliance with the standards, statutes and rules described in ORS 469.501 and 469.503.

In addition to all other conditions stated in this Amended Site Certificate, the City is subject to all conditions and requirements contained in the rules of the the Council and local ordinances and state law in effect on the date this Amended Site Certificate is executed, except that upon a clear showing of a significant threat to the public health, safety or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules. ORS 469.401(2).

In the event any of the conditions in this Amended Site Certificate conflict with or are inconsistent with a requirement in OAR chapter 345, or a condition in the Council's Final Orders, this Amended Site Certificate shall control.

The Council recognizes that many specific tasks related to the

design, construction, operation and retirement of the Facility will be undertaken by the City's agents or contractors. However, the City, as the holder of the Amended Site Certificate, shall be responsible for ensuring compliance with all provisions of this Amended Site Certificate.

A. Mandatory Conditions in Site Certificates OAR 345-27-020

(1) The Site Certificate holder shall submit to the Office a legal description of the Site to be appended to this Amended Site Certificate prior to construction.

(2) The Facility shall be designed, constructed, operated and retired:

(a) Substantially as described in this Amended Site Certificate;

(b) In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time this Amended Site Certificate is issued; and

(c) In compliance with all applicable permit requirements of other state agencies.

(3) Construction of the Facility must begin and be completed by dates specified in section IV.A. of this Amended Site Certificate.

(4) No construction, including clearing of a right-of-way, except for the initial survey, may commence on any part of the Facility until the Site Certificate holder has adequate control, or has the statutory authority to gain control, of the lands on which clearing or construction will occur.

(5) Prior to construction, the Site Certificate holder shall submit to the State of Oregon, through the Council, a bond or comparable security, satisfactory to the Council, in an amount specified in section IV.D. of this Amended Site Certificate adequate to restore the Site to a useful condition if the Site Certificate holder:

(a) Begins but does not complete construction of the Facility; or

(b) Permanently closes the Facility before establishing a financial mechanism or instrument, satisfactory to the Council, that will assure funds will be available to adequately retire the Facility and restore the Site.

The security which the Council determines to be satisfactory is in section IV.D. of this Amended Site Certificate.

(6) If mitigation is required after an affirmative finding by the Council under any standards of OAR Chapter 345, Division 22 or Division 24, the Site Certificate holder, in consultation with affected state agencies and local governments designated by the Council, shall develop specific mitigation plans consistent with Council findings under the relevant standards. Such plans must be approved by the Office prior to the beginning of construction or, as appropriate, operation.

(7) The Site Certificate holder shall prevent any condition, over which the Site Certificate holder has control, from developing on the Site that would preclude restoration of the Site to a useful condition.

(8) Conditions related to Facility retirement and Site restoration:

(a) The Site Certificate holder shall establish a financial mechanism or instrument, satisfactory to the Council, that will assure funds will be available to adequately retire the Facility and restore the Site. The financial mechanism which the Council determines to be satisfactory is in section IV.D. of this Amended Site Certificate;

(b) At least five years prior to planned retirement of the Facility, the Site Certificate holder shall submit a retirement plan to the Council for approval. The plan shall describe how the Site will be restored adequately to a useful condition, including options for post-retirement land use, information on how impacts to fish, wildlife and the environment will be minimized during the retirement process and measures to protect the public against risk or danger resulting from post-retirement Site conditions; and

(c) The Facility shall be retired after its useful life in accordance with the approved final retirement plan, pursuant to OAR 345-27-110.

(9) This Amended Site Certificate includes as conditions those representations from the Application for Site Certificate for the KCP, the Request for Amendment No. 1 to the KCP, and the relevant supporting record deemed by the Council to be binding commitments on the part of the City. The conditions that the Council deems to be binding commitments on the part of the City are listed in section IV. of this Amended Site Certificate and

Appendicies.

(10) The Site Certificate holder shall restore vegetation to the extent practicable and shall landscape portions of the Site disturbed by construction in a manner compatible with its surroundings and/or proposed future use. Upon completion of construction, the Site Certificate holder shall dispose of all temporary structures not required for future use and all timber, brush, refuse and flammable or combustible material resulting from the clearing of land or from construction of the Facility.

(11) The Facility shall be designed, engineered and constructed to avoid potential dangers to human safety presented by seismic hazards affecting the Site as defined in ORS 455.447(1)(d), and including amplification, that are expected to result from the reasonably probable seismic event.

#### B. Site Specific Conditions OAR 345-27-023

(1) The Site Certificate holder shall notify the Office, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if Site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the Application for Site Certificate or the Request for Amendment for the KCP. The Council may, at such time, require the Site Certificate holder to propose additional mitigating actions in consultation with the Department of Geology and Mineral Industries and the Building Codes Division.

(2) The Site Certificate holder shall notify the Office, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the Site.

(3) The Site Certificate holder shall restore the reception of radio and television at residences and commercial establishments in the primary reception area to the level present prior to operations of the transmission line, at no cost to residents experiencing interference resulting from the transmission line.

#### C. Monitoring Conditions OAR 345-27-028

(1) The Site Certificate holder shall establish, in consultation with affected state agencies and local governments,

monitoring programs, as provided in section IV of this Amended Site Certificate, for impact on resources protected by the standards of OAR Chapter 345, Divisions 22 and 24, and to ensure compliance with the Amended Site Certificate. The programs shall be subject to the review and approval of the Council.

(2) For each monitoring program that it establishes, the Site Certificate holder shall have quality assurance measures that are reviewed and approved by the Office of Energy prior to commencement of construction or commencement of commercial operation, as provided in section IV of this Amended Site Certificate.

(3) If the Site Certificate holder becomes aware of a significant environmental change or impact attributable to the Facility, the Site Certificate holder shall submit to the Office of Energy as soon as possible a written report identifying the issue and assessing the impact on the Facility and any affected conditions of this Amended Site Certificate.

#### D. Public Health and Safety Standards for Pipelines OAR 345-24-060

For the purposes of conditions in section III.D., "pipelines" means the KCP 300 foot (approximately) natural gas interconnection between the Energy Facility and the PGT Medford lateral pipeline.

(1) Pipelines shall be constructed in accordance with the requirements of the U.S. Department of Transportation as set forth in Title 49, Code of Federal Regulations, Part 192.

(2) Pipelines shall be designed so that noise resulting from operation of compressor stations and other Related or Supporting Facilities shall not violate standards specified in OAR Chapter 340, Division 35.

(3) Pipelines shall have mechanical structures that allow the pipeline to be sealed off, in the event of leakage, in a manner that will minimize the release of flammable materials. This is rebuttably presumed to be satisfied by the requirements of Title 49, Code of Federal Regulations, Part 192.

(4) The Site Certificate holder shall develop a program using

the best available practicable technology to monitor pipelines to ensure protection of public health and safety.

#### E. Design Standards for Transmission Lines OAR 345-24-090

For the purposes of conditions in section III.E., "transmission line" means the KCP 4.5 mile (approximately) 230 kV transmission line from the Energy Facility to the PP&L Klamath Falls substation.

(1) The transmission line shall be designed so that alternating current electric fields shall not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.

(2) The transmission line shall be designed so that induced currents resulting from the transmission line and Related or Supporting Facilities will be as low as reasonably achievable.

The City must develop and implement a program which shall provide reasonable assurance that all fences, gates, cattleguards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity shall be grounded through the life of the line.

(3) The transmission line shall be designed, constructed, and operated in a manner consistent with the 1993 edition of National Electrical Safety Code (American National Standards Institute, Section C2, 1993 Edition).

#### F. Construction and Operation Rules for Facilities OAR 345- 26

##### (1) Compliance Plans (OAR 345-26-040)

Following receipt of this Amended Site Certificate or an amendment of this Amended Site Certificate, the Site Certificate holder shall implement a plan which verifies compliance with all terms and conditions of this Amended Site Certificate and applicable statutes and rules. This shall be documented and maintained for Office or Council inspection.

##### (2) Annual Status Report for Non-nuclear Facilities (OAR 345-26-080)

General Reporting Obligation for non-nuclear facilities:

(a) The Site Certificate holder shall, within 120 days of the end of each calendar year, submit an annual report to the

Council addressing the subjects listed in this condition. The reporting date may be changed by mutual agreement of the Council Secretary and the Site Certificate holder.

(b) To the extent that information required by this condition is contained in reports the Site Certificate holder submits to other state, federal or local agencies, excerpts from such other reports may be submitted to satisfy this condition. The Council reserves the right to request full copies of such excerpted reports.

Contents of Annual Report:

(a) Facility Status: An overview of Site conditions, the status of facilities under construction, and a summary of the operating experience of facilities which are in operation. This section of the annual report shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents, or the like, which occurred during the year and which had a significant adverse impact on the Facility.

(b) Reliability and Efficiency of Power Production: For electric power plants,

(A) The plant availability and capacity factors for the reporting year. If equipment failures or plant breakdowns had a significant impact on those factors, describe them and plans to minimize or eliminate their recurrence.

(B) The efficiency with which the power plant converts fuel into electric energy. If fuel chargeable to power heat rate was evaluated when the Facility was sited, efficiency shall be calculated using the same formula and assumptions, but using actual data.

(c) Status of Surety Information: The annual report shall provide documentation demonstrating that the bond or other security provided under section III.A.(5) of this Amended Site Certificate is in full force and effect and will remain in full force and effect for the term of the next reporting period.

(d) Industry Trends: The annual report shall discuss any significant industry trends that may affect the operations of the Facility.

(e) Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with the terms and conditions of this Amended Site Certificate, a summary of the results of those activities, and a discussion of any significant changes to any monitoring or mitigation program, including the reason for any such changes.

(f) Compliance Report: The Site Certificate holder shall report all instances where it has not complied with a condition of this Amended Site Certificate. For ease of review, this section of the report shall use numbered subparagraphs corresponding to the applicable sections of this Amended Site Certificate.

(g) Facility Modification Report: The report shall summarize changes to the Facility which the Site Certificate holder has determined do not require an amendment to this Amended Site Certificate in accordance with OAR 345-27-050.

(3) Schedule Modification (OAR 345-26-100)

The Site Certificate holder shall promptly notify the Office of any changes in major milestones for construction, decommissioning, operation, or retirement schedules. Major milestones shall be as identified by the Site Certificate holder in its construction, retirement or decommissioning plan.

(4) Correspondence With Other State or Federal Agencies (OAR 345-26-105)

The Site Certificate holder and the Office shall exchange copies of all correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. Abstracts of reports may be submitted in place of full reports; however, full copies of abstracted reports must be provided at the request of the Office.

(5) Construction Report (OAR 345-26-125)

During construction of the Energy Facility and Related or Supporting Facilities, the Site Certificate holder shall submit semiannual Construction Progress Reports to the Council. Any significant changes to major milestones for construction shall be highlighted in the report.

(6) Notification of Incidents (OAR 345-26-170)

The Site Certificate holder shall notify the Office within 72 hours of any occurrence involving the Facility if:

- (a) There is an attempt by anyone to interfere with its safe

operation;

(b) A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment;

(c) There is any fatal injury at the Facility.

#### **IV. CONDITIONS ISSUED PURSUANT TO COUNCIL STATUTORY AUTHORITY**

The following conditions are presented by subject area only as an aide to their use and shall apply and should be read together. Where appropriate, citations in parentheses show the basis of the condition.

##### **IV. A. General Conditions**

**IV. A. 1.** The conditions in section IV.A.1. are based on statements that the applicant made in its Application for Site Certificate (ASC) (November 6, 1996), its Request for Amendment (RFA) (October 6, 1997) or in other correspondence with the Office.

1. The general arrangement of the KCP Energy Facility shall be substantially similar to that shown in the ASC, Figure B-3, or in the RFA, Figure B-3, which are attached as appendix A to this Amended Site Certificate.

2. The Energy Facility and its Related or Supporting Facilities shall be located as shown in the ASC, Figure C-1 which is attached as appendix B to this Amended Site Certificate.

3. The KCP fuel oil storage tank shall be surrounded by a secondary containment structure with a barrier of sufficient non-permeability and sufficient volume to contain the full contents of the tank and precipitation and comply with the applicable provisions of 40 CFR Part 112 and OAR chapter 340, division 47. The tank secondary containment area shall have a fire protection system that complies with applicable NFPA standards for fuel oil storage. (ASC, B-2, F-6)

4. The Energy Facility shall include a fire protection pump house and a fire suppression system. (ASC, B-2)

5. KCP tanks which store hazardous substances as defined in ORS

chapter 465 shall have secondary containment with a barrier of sufficient non-permeability and sufficient volume to comply with applicable federal and Oregon laws pertaining to the storage of such hazardous substances. (ASC, B-2)

6. The Energy Facility structures shall be architecturally designed to be visually compatible with the surrounding area and the Energy Facility site shall including landscaping. (ASC, B-3)

7. The combustion turbine(s) shall be surrounded with an acoustically insulated enclosure(s) to reduce noise levels to acceptable occupational exposure levels and to provide containment for automatic fire suppression equipment. (ASC, B-5)

8. The steam turbine condenser system shall include a non-condensable gas removal system and shall be designed to condense all steam from the HRSG(s) in the event a steam turbine trip occurs. (ASC, B-6)

9. The condenser system shall include redundant condensate pumping capability substantially similar to that described in the ASC, page B-6 which is in appendix C to this Amended Site Certificate.

10. The cooling tower shall include a fire protection system in accordance with applicable NFPA standards pertaining to the specific materials selected for the cooling tower. (ASC, B-6)

11. The cooling tower makeup water pumping station shall include redundant pumping capability substantially similar to that described in the ASC, page B-7 which is in appendix C to this Amended Site Certificate.

12. The boiler and cooling tower chemical treatment storage areas shall include secondary containment with a barrier of sufficient non-permeability and sufficient volume to contain any chemical from spills or tank failures. (ASC, B-7, F-4)

13. The Energy Facility shall have a state-of-the-art, integrated microprocessor-based control system substantially similar to that described in the ASC, page B-7 which is in appendix C to this Amended Site Certificate.

14. The Energy Facility control system shall include an uninterruptible power supply to provide emergency power to critical equipment in the event of a power outage. (ASC, B-8)

The KCP shall include an on-site emergency diesel generator. Except for brief periods for testing or maintenance, the emergency diesel generator may operate only to provide on-site power during conditions when the Energy Facility is not operating and power is not otherwise available. The emergency diesel generator shall have a capacity no greater than 500 net kilowatts.

15. The 230 kV transmission line shall incorporate design features to prevent electrocution of raptors. The line shall use H-frame wood pole structures except where the KCP determines that single pole structures are necessary. Wood pole H-frame structures shall be about 75 feet in height above the ground surface. Single pole structures may be of wood or steel and shall be about 95 feet in height above the ground surface. Taller structures may be used under special conditions such as highway crossings, angle points and where necessary to address property owner concerns. Steel pole structures shall be a brownish color with a non-reflective surface. (ASC, B-8; H. Ferris, PP&L, pers. comm. to the Office 1/23/97, 3/4/97)

16. The Energy Facility shall include a fire protection system substantially similar to that described in the ASC, page B-9 which is in appendix C to this Amended Site Certificate.

17. Regenerant wastewater from mixed bed demineralizers shall be neutralized and combined with cooling tower blowdown and discharged to the City's municipal wastewater system substantially as described in the ASC, page B-9 which is in appendix C to this Amended Site Certificate.

18. The Energy Facility shall include a stormwater drainage system substantially as described in the ASC, page B-10, or in the RFA, page B-5, and the ASC, page V-3 which are in appendix C to this Amended Site Certificate.

19. KCP hazardous solid wastes shall be managed in accordance with applicable local and state regulatory standards and requirements and substantially as described in the ASC, page B-10 which is in appendix C to this Amended Site Certificate.

20. KCP non-hazardous solid wastes shall be managed substantially as described in the ASC, page B-10 which is in appendix C to this Amended Site Certificate.

21. Stormwater collected at the Energy Facility Site, but away from equipment locations, shall be discharged to an on-site stormwater retention/evaporation pond. (ASC, F-3)

22. The wastewater pumping station at the Energy Facility Site shall include redundant pumping capability substantially as described in the ASC, page B-10 which is in appendix C to this Amended Site Certificate.

23. The Facility shall comply with the list of applicable federal, state and local safety codes and standards, as described in the ASC, pages B-13 and 14 (which are in appendix C to this Amended Site Certificate), as modified by the comments of the Building Codes Division Agency Report, dated December 9, 1996, Interoffice Memo dated December 13, 1996 from R. Tamerhoulet to M. Long, which is in appendix D to this Amended Site Certificate.

24. KCP construction-related waste materials shall be managed and disposed substantially as described in the ASC, pages F-1 and 2 which are in appendix C to this Amended Site Certificate.

25. The KCP shall recycle to the extent reasonably practicable spent lube oil and hydraulic fluids from major equipment. (ASC, F-4)

26. All Energy Facility Site area drains which are reasonably likely to contain oil contamination shall be routed to the oil/water separator. Skimmed oil from the separator shall be provided to a licensed oil recycler. (ASC, F-4)

27. The KCP shall provide a concrete basin at each large electrical transformer to capture any oil that might spill during a transformer failure or maintenance operation. Spilled oil and replaced oil shall be recycled to the extent reasonably practicable. (ASC, F-4)

28. The Energy Facility site natural gas fuel system shall be designed, constructed and operated substantially as described in the ASC, page F-6 which is in appendix C to this Amended Site Certificate.

29. The KCP shall manage non-fuel hazardous substances and shall include facilities substantially as described in the ASC, pages F-6 and F-7 which are in appendix C to this Amended Site Certificate.

30. The KCP shall meet or exceed the safety and health requirements listed in the ASC, page F-7 which is in appendix C to this Amended Site Certificate.

31. Before commencing construction, the City shall obtain an NPDES General Permit 1200-C for construction of the Facility.  
(ASC, M-1)

32. Before commencing construction, the City shall obtain an amendment to its NPDES permit for the Spring Street Wastewater Treatment Plant to allow the reuse of effluent for the KCP.  
(ASC, M-1)

33. Before commencing construction, the City shall obtain an Air Contaminant Discharge Permit for the ~~F~~Facility.

34. The 230 kV electric transmission line shall be designed to operate within the acceptable signal to noise ratios associated with clear signal reception for radio and television. (ASC, W-1)

35. Ground disturbance from construction of the KCP shall be limited to: the Energy Facility Site; a temporary construction parking and laydown area near the Energy Facility Site substantially as shown in the ASC, Fig. X-2, or in the RFA, Fig. X-1 (which are in appendix C to this Amended Site Certificate); transmission line pole/structures and associated access roads, pulling areas, and construction areas; and a 40-foot width (approximate) for pipeline burial and construction equipment access which shall be located within construction rights-of-way.  
(ASC, N-27 and X-1)

36. The Facility shall not construct or use an underground storage tank. (RMI 12/20/96 letter to the Office)

**IV. A. 2.** The conditions in section IV.A.2. are not based on representations that the applicant made in its ASC, its RFA, or in other correspondence with the Office.

37. The KCP may burn only natural gas, as primary fuel, and low-sulfur oil as a backup fuel for the auxiliary boiler. The KCP may burn only low-sulfur fuel in the emergency diesel generator.

38. Construction of the Facility shall commence on or before March 5, 2000 (which is 30 months from the date the original Site Certificate was executed).

39. Construction of the Facility shall be completed on or before September 5, 2002 (which is five years from the date the original Site Certificate was executed). Construction completion of the Facility shall be the commercial operation date of the Facility.

40. The Council may grant an extension of the construction commencement date and the construction completion date in accordance with OAR 345-27-030, or any successor rule, in effect at the time the request for extension is requested.

41. The City shall provide to the Office as part of any request to amend the Amended Site Certificate a list of the names and mailing addresses of all owners of record, as shown on the most recent property tax assessment roll, of property located within the Site, and within 100 feet of the Site where the Site is within an urban growth boundary, and within 250 feet of the Site where the Site is outside an urban growth boundary and not within a farm or forest zone, and within 500 feet of the Site where the Site is within a farm or forest zone. "Site" as used herein means all land upon which the Facility is located and includes the Energy Facility Site and all land upon which Related or Supporting Facilities are located.

42. The City or its authorized representative shall report to the Office within 72 hours of discovery any material violation of any condition of the Amended Site Certificate by the City or any of its contractors, subcontractors or agents. The City or its authorized representative shall report to the Office within 24 hours of discovery if the City or any of its contractors, subcontractors or agents creates any condition by construction or operation of the Facility that endangers the public health and safety.

#### **IV. B. 500 MW Exemption and Carbon Dioxide Emissions Standard**

In interpreting the conditions in section IV.B. of this Amended Site Certificate any ambiguity will be clarified by reference to, and in the following priority, this Amended Site Certificate, the Final Order granted on April 17, 1998 for the Amended Site Certificate, the Final Order granted on August 15, 1997 for the ASC, the 500 Megawatt Exemption Final Order, and if necessary, the record of the proceedings which led to those Orders. For these conditions, the index by which the future value of money shall be converted to 1996 or 1998 dollars shall be the Implicit Price Deflator for the Gross Domestic Product as published by the U.S. Bureau of Economic Analysis of the Department of Commerce or a successor agency. These values are published annually each February in the "Economic Report of the President".

1. KCP shall make available from the Energy Facility to off-site industrial use the steam energy equivalent of at least 200,000 pounds of steam per hour at 375 psig and 455°F (which is equal to 242.8 MMBtu/hr) on an annual average basis. The amount, temperature and pressure of steam supplied shall be measured at the point of interconnection of the Energy Facility with its off-site industrial use. KCP shall report this information to the Council on an annual basis. KCP shall calculate the steam energy equivalent of the steam it makes available to off-site industrial use using accepted values for the energy content of the steam, such as those found in steam tables published by the American Society of Mechanical Engineers.

KCP's off-site industrial use shall be at least the steam energy equivalent of 200,000 pounds of steam per hour at 375 psig and 455° F on a five year basis, measured in discrete, successive five-year periods. "Use" of the steam means that the steam is used to displace another source of carbon dioxide emissions from fossil fuels that would have otherwise occurred or continued to occur. At the end of each five year period following commercial operation, KCP shall determine and report to the Council the hourly average steam volume, pressure and temperature delivered to off-site industrial use for the applicable five year period.

Should the hourly average steam used by KCP's off-site industrial use be less than the steam energy equivalent of 200,000 pounds per hour at 375 psig and 455°F, KCP shall develop, present to the Council for approval, and implement a plan to make available and sell to another steam use the steam energy

equivalent not used by KCP's existing off-site industrial use at the same or similar cost incentive as provided to KCP's existing off-site industrial use. If within twelve months after Council approval, KCP has not contracted to make available and sell to another steam user the steam energy equivalent not used by KCP's existing off-site industrial use, then KCP shall develop, present to the Council for approval, and implement a program to offset an amount of CO<sub>2</sub>, NO<sub>x</sub> or PM-10, or any combination thereof, equivalent to the monetized incremental emissions resulting from the existing off-site industrial use of less than the steam energy equivalent of an average of 200,000 pounds of steam per hour at 375 psig and 455°F. In any event, KCP shall offset an amount equivalent to the monetized incremental emissions resulting from the existing off-site industrial use of less than the steam energy equivalent of an average of 200,000 pounds of steam per hour at 375 psig and 455°F, measured on a five year basis, for 30 years. Calculations of monetized emissions shall use the same methodology and monetary values of emissions employed in the 500 megawatt exemption Final Order.

2. KCP shall provide to the Council an executed steam sales contract with its steam host before beginning construction.

3. Before commencing construction, KCP shall establish an interest bearing escrow account in the amount of \$3.1 million, in 1998 dollars, for implementation of the offset portfolio described in its Request for Exemption. Any interest accrued in the account shall be used to implement the offset portfolio.

4. Before commencing construction, KCP shall commence good faith implementation of its offset portfolio described in its Request for Exemption.

5. If the Facility does not achieve the milestone of commercial operation, KCP's obligation to further fund and implement the offset portfolio shall end and any remaining funds shall revert to KCP. The Facility will be deemed to achieve the milestone of commercial operation when KCP accepts the Facility as available for commercial operation from the Facility's constructor.

6. Before commencing construction, KCP shall make available a contingency account in the amount of \$300,000 in 1996 dollars. The funds shall be placed in an interest bearing account, and accrued interest shall be available to address contingencies as

provided in this condition. The contingency account may be drawn upon in years 10, 20 and 30 to provide additional funding in the event the mitigation portfolio is not meeting projections, within 10 percent. In the event actual CO<sub>2</sub> mitigation is less than 90 percent of projected CO<sub>2</sub> offsets after 10, 20 and 30 years, and if cogeneration or other offsets do not compensate for this shortfall (including offsets resulting from reduced methane emissions based on the then-prevailing IPCC CH<sub>4</sub>-CO<sub>2</sub> equivalency factor), KCP shall use the contingency fund to implement additional CO<sub>2</sub> offsets. The amount used shall be sufficient to make up the deficiencies in meeting projected CO<sub>2</sub> offsets to the extent possible with the available contingency funds. The contingency fund available in years 20 and 30 shall comprise the fund less funding draws in years 10 and 20, respectively. Any unused portion of the fund shall revert to the KCP after year 30.

7. Any financial returns, including the return of capital investment along with accrued interest, associated with implementation of KCP's carbon offset portfolio during the first 30 years shall be reinvested in carbon offset portfolio activities as proposed in the request for exemption. At year 30, KCP shall consult with the Council regarding the disposition of any financial returns after year 30. At the Council's discretion, these returns may either be invested in additional CO<sub>2</sub> mitigation activities or may be redirected to other environmental purposes.

8. On implementation of its offset portfolio, KCP shall undertake the offset monitoring and verification programs described in its Request for Exemption. KCP will make available up to \$50,000 per year, in 1998 dollars, for these monitoring and verification programs. KCP shall use the monitoring and verification funds to provide monitoring and verification adequate to meet the requirements of the conditions of this Amended Site Certificate.

9. KCP shall make its offset portfolio financial records available for auditing by the Council or a designated party for the life of the Facility, provided that the cost of such auditing shall be paid by the Council.

10. Based on the monitoring and verification programs in Condition 8, KCP shall report as follows. KCP shall annually report offset performance to the Council and the U. S.

Department of Energy Section 1605(b) greenhouse gas registry, for 30 years. Every five years for 30 years KCP shall report to the Council offset portfolio performance, associated CO<sub>2</sub> and methane benefits, and explain changes from the offset benefits projected in the Council's analysis of KCP's request for exemption. KCP shall report, among other things, actual or estimated carbon dioxide offsets achieved, the quantity and type of each offset measure, and the expenditure of funds for each type of measure in the offset portfolio.

11. KCP shall consult with the Council on an ongoing basis regarding portfolio emphasis and performance. As requested by the Council, and to the extent made possible by in-place agreements, KCP shall reallocate available funds among its portfolio or other projects requested by the Council.

12. Subject to potential reallocation of funds described in Condition #11, of the \$3.1 million in the escrow fund, \$0.5 million shall fund the Solar Electric Light Fund (SELF), \$1.5 million shall fund the Oregon Forest Resources Trust (FAT), \$1.0 million shall fund new projects to generate electricity with otherwise waste methane, and \$0.1 million shall fund geothermal heating projects in Klamath Falls, Oregon, as described in the Request for Exemption.

13. KCP shall commit \$1.0 million of the \$3.1 million escrow fund to fund new projects to generate electricity with otherwise waste methane from sewage treatment plants and coal mines. The projects shall be administered by Northwest Fuel Development, Inc., or an equivalent contractor, at KCP's discretion. Net revenues, which are total revenues less operating costs, from the operation of each electrical generation Facility shall, for a period of ten years, be returned to a Revolving Investment Fund (IF) established by KCP. KCP shall structure the IF so that net revenues from each installation financed by KCP's original capital investment will be used to finance installation of additional sewage treatment plant and coal mine methane generating facilities for a period of ten years as described in the Request for Exemption. The IF shall be structured so that KCP (or the IF manager) will monitor performance of the contractor and the installations, track revenues and offsets attributable to IF-financed systems, and ensure revenues will, for a period of thirty years, be used to finance installation of additional generating equipment. KCP (or the IF manager) shall track the number of installations attributable to the IF and

report regularly to the Council on the performance of the IF. KCP shall establish management or contractual controls of the contractor to provide long-term control of the Fund and the methane project.

14. KCP shall commit \$0.5 million of the \$3.1 million escrow fund into a Revolving Investment Fund for photovoltaics as described in the Request for Exemption. The Fund shall be structured to provide capital to PV companies identified by the SELF. The solar projects shall be in India, Sri Lanka or China unless KCP demonstrates to the Council a better location for the PV projects. KCP shall structure the Fund so that, as revenues from the systems financed by KCP's working capital come into the companies, those revenues will be used to finance installation of additional PV systems. The Fund shall be structured so that SELF (or the Fund manager) shall monitor performance of the companies, track the revenues attributable to Fund-financed systems, and ensure those revenues will be used to finance installation of additional PV systems. SELF (or the Fund manager) shall track the number of PV systems financed by the IF and report regularly to KCP on the performance of the IF. KCP shall establish management or contractual controls of the Fund and the PV firms to provide long-term control of the Fund and the PV project.

15. KCP shall commit \$0.1 million of the \$3.1 million escrow fund to fund geothermal heating projects in Klamath Falls, Oregon. KCP shall establish a revolving credit fund that will loan money to assist in the hookup of buildings in downtown Klamath Falls to the geothermal heating system. The loans shall be structured for repayment to the fund within three years. Repaid loan amounts shall be used to fund hook up of additional buildings to the geothermal heating system. The fund shall be structured so that KCP or the City of Klamath Falls will track revenues and offsets attributable to the fund and ensure that repaid loan amounts are used to hook up additional buildings to the geothermal heating systems.

16. KCP shall commit \$1.5 million of the \$3.1 million to the FAT. KCP shall pursue new funding to match these funds on a 3:1 basis.

17. KCP shall report as "matching funds" under the FAT proposal only those funds for which the funding entity does not claim, and certifies that it will not claim, offset credit.

18. FAT funds attributed to KCP's offset proposal shall be used to plant Site Class II lands for the first 6,250 acres.

19. The Council shall hold in trust for KCP all CO<sub>2</sub> credits, including CO<sub>2</sub> credits submitted for inclusion in the Section 1605(b) database, that KCP receives from Project offsets. The credits shall be available for use by KCP. The credits shall not be sold.

20. The annual water use by the Facility shall meet the following requirements:

- (1) The Facility shall not use more than 160 gallons per minute (gpm) on an annual average basis (8,760 hours) from sources other than Spring Street Wastewater Treatment Plant (SSWTP) effluent during all times when the SSWTP is permitted to deliver effluent to the Facility. This limit shall not include water supplied as steam to the steam host.
- (2) All other water used by the Facility shall be effluent from the SSWTP, except when the SSWTP is not allowed to deliver effluent to the Facility. During such times the Facility shall use only storm water collected on the Site, or in the event storm water is not available, another temporary source of backup water approved by the Council.
- (3) Facility wastewater flows shall all be delivered to a sanitary sewer for delivery to the SSWTP. Should the City modify its SSWTP NPDES permit to allow alternative wastewater treatment, disposal, and/or reuse, the wastewater will be returned to the City in compliance with the then prevailing conditions of the City NPDES permit in effect at the time.

21. Before beginning construction, KCP shall provide to the Council the plant performance guarantee from the executed contracts for the design and construction of the Facility showing a net full power heat rate of no greater than 6795 Btu per kWh (HHV) and showing the expected nominal electric generating capacity of the Facility at average annual conditions with no steam load and using natural gas as the fuel, which shall include liquidated damages provisions adequate to enforce the guarantee. KCP shall, as part of the post-construction

completion compliance status certification report, provide capacity and heat rate performance test data showing that the nominal electric generating capacity of the Energy Facility is no more than 500 MW and that the heat rate is no more than 6795 Btu per kWh (HHV) with no steam load and using natural gas as the fuel.

22. Within two months after the completion of the first full year of commercial operation of the Energy Facility, KCP shall report to the Council the Energy Facility's net full power heat rate as determined by a 100 hour test. Such test will be completed within one year of commercial operation of the Energy Facility (Year One Test). Based on such test KCP shall certify the nominal electric generating capacity (Year One Capacity) and the net full power heat rate (Year One Heat Rate) of the Energy Facility on a new and clean basis, as defined in ORS 469.503(2)(e)(G). The net full power heat rate shall be measured as the total fuel input divided by the net kWh production over the 100 hour test period, adjusted for difference between the actual ambient Site conditions and average annual conditions. If the adjusted net full power new and clean heat rate is greater than the Target Heat Rate of 6,795 Btu (HHV) per kWh with no steam supplied to off-site industrial use and natural gas as the fuel or 7,212 Btu (HHV) per kWh for 200,000 pounds of steam per hour exported and natural gas as the fuel, or a linear interpolation or extrapolation of these values (at average annual ambient conditions based on the steam energy equivalent of steam at a pressure of 375 pounds per square inch gauge and a temperature of 455 degrees fahrenheit, in each case measured at the point of interconnection of the Energy Facility with KCP's off-site industrial use), KCP shall perform a second 100 hour test no later than one year following the completion of the first 100 hours test. If, following the second 100 hour test, the net full power heat rate exceeds the adjusted new full power heat rate just described, then KCP shall develop, present to the Council for approval, and implement, a program to offset the incremental CO<sub>2</sub> emissions resulting from the higher heat rate. This requirement to offset the incremental CO<sub>2</sub> emissions resulting from the higher heat rate determined from the second 100 hour test shall only apply to the first 318 MW of nominal electric generating capacity. The higher heat rate demonstrated by the second 100 hour test shall then become the Target Heat Rate.

23. KCP shall, for each calendar year following the year in which the 100 hour test described above is completed, certify to the Council, based on a 100 hour test conducted as described in condition number 22 that the net full power heat rate is no greater than three percent above the Target Heat Rate. In the event that KCP fails to make such certification, within sixty days following the end of each calendar year, KCP shall, at its option, either:

- (1) within 17 months, implement corrective measures to achieve a net full power heat rate of not more than one and one-half percent greater than the heat rate (based upon a 100 hour heat rate test as described in Condition IV.B.22); or
- (2) develop, present to the Council for approval, and implement, a program to offset the incremental CO<sub>2</sub> emissions resulting from the new, higher heat rate in which case the new, higher heat rate shall become the Target Heat Rate. This requirement to offset the incremental CO<sub>2</sub> emissions resulting from the new, higher heat rate shall only apply to the first 318 MW of nominal electric generating capacity.

24. KCP shall use the following methodology for calculating the offset funds and the selection and contracting funds (monetary path payment requirement) it must make available to the qualified organization under ORS 469.503(2)(d)(A). KCP shall use the contracted design parameters reported under Condition IV.B.21 to calculate the estimated monetary path payment requirement. KCP shall use the Year One Capacity and the Year One Heat Rate reported under Condition IV.B.22 to calculate whether it owes additional monetary path payments.

- (1) KCP shall first determine the incremental capacity by subtracting 318 MW from the nominal electric generating capacity of the Facility with no steam load (using the capacity calculated from the contracted design parameters reported under Condition IV.B.21 or the Year One Capacity reported under Condition IV.B.22);
- (2) KCP shall multiply the heat rate calculated from the contracted design parameters reported under Condition IV.B.21 or the Year One Heat Rate reported under Condition IV.B.22 by the carbon dioxide emission factor for natural

gas (0.000117 lbs. CO<sub>2</sub>/Btu) to calculate the carbon dioxide emission rate (lbs. CO<sub>2</sub>/kWh);

- (3) KCP shall subtract the carbon dioxide standard of 0.7 lbs. CO<sub>2</sub>/kWh from the carbon dioxide emission rate to calculate the excess carbon dioxide emission rate (lbs CO<sub>2</sub>/ kWh);
- (4) KCP shall multiply the incremental capacity by 8,760 hours to determine the annual nominal energy for the plant (kWh). KCP shall then multiply the annual nominal energy by the excess CO<sub>2</sub> emission rate, then multiply that product by 30 years. It shall then divide that product by 2,000 pounds per ton to calculate total tons of excess CO<sub>2</sub> emissions resulting from the incremental capacity for the deemed life of the plant;
- (5) KCP shall multiply the total tons of excess carbon dioxide emissions by \$0.57 per ton of CO<sub>2</sub> to determine the sub-total for the estimated or actual offset funds;
- (6) KCP shall subtract \$500,000 from the offset funds subtotal; then multiply the remaining amount by 4.286 percent; then add \$50,000 to that product to determine the estimated or actual selection and contracting funds sub-total;
- (7) When KCP submits the Year One Test report required in Condition IV.B.22, KCP shall increase its payments to the respective escrow accounts for offset funds and selection and contracting funds if the calculation of the actual amounts of offset funds and selection and contracting funds due exceeds the amounts of those funds that KCP had deposited to the respective escrow accounts prior to commencing construction.

KCP shall make the appropriate calculations and increase its payments if necessary within 45 days of filing its Year One Test report with the Council.

In no case shall KCP receive a refund from the escrow accounts or from the Oregon Climate Trust based on the calculations made using the Year One Capacity to determine the actual incremental capacity and using the Year One Heat Rate.

25. KCP shall establish and maintain separate escrow accounts

for the offset funds and the selection and contracting funds.

- (1) KCP shall deposit the estimated offset funds and estimated selection and contracting funds in 1998 dollars, calculated pursuant to Condition IV.B.24, into the escrow accounts prior to commencing construction. KCP or its agent shall disburse the funds to the Oregon Climate Trust for use as specified in ORS 469.503(2)(d)(A).
- (2) KCP shall deposit any additional funds, in 1998 dollars, into the appropriate escrow accounts, if required under Condition IV.B.24 (7), within 45 days of filing its Year One Test report with the Council.
- (3) The portion of any interest accruing in either escrow account up to the time of disbursement of funds to the Oregon Climate Trust that is equivalent to the 1998 dollar index adjustment (as described in the introduction to Section IV.B. of the Amended Site Certificate) shall be for the benefit of the Oregon Climate Trust and shall be disbursed to the Oregon Climate Trust for use as specified in ORS 469.503(2)(d)(A). Any remaining interest that exceeds the 1998 dollar adjustment at the time of disbursement of funds to the Oregon Climate Trust shall be disbursed to the KCP upon its request.

26. The combustion turbine unit(s) shall be fueled solely with natural gas or with synthetic gas with a carbon content per MMBtu no greater than natural gas. This fuel limitation does not apply to the use of oil in the auxiliary boiler or the emergency diesel generator.

27. Other than depositing the offset payment funds and selection and contracting funds provided in Condition IV.B.25, KCP shall have no obligation with regards to offsets for the nominal incremental generating capacity of the Project in excess of 318 MW, nor shall any nonperformance, negligence or misconduct on the part of the Oregon Climate Trust be a basis for revocation of the Amended Site Certificate or any other enforcement action by the Council with respect to the City.

#### **IV. C. Organizational, Managerial and Technical Expertise**

1. The City of Klamath Falls shall retain a qualified firm or

firms to assist it in developing, constructing and operating the KCP as described in this order.

2. The City of Klamath Falls shall promptly notify the Council if for any reason Pacific Klamath Energy, Inc. (PKE), or its affiliates, does not provide the services to develop, construct and operate the KCP described in this order.

3. The City of Klamath Falls shall retain a fully-qualified engineering, construction and procurement (EPC) firm to construct the KCP.

4. Prior to construction, the City shall identify for the Council the EPC contractor chosen to construct the Facility. Prior to commercial operation, the City shall identify for the Council the contractor chosen to operate the Facility. The City shall report to the Council any change in EPC contractor or operator.

5. Any matter of non-compliance under this Amended Site Certificate shall be the responsibility of the City. Any notice of violation issued will be issued to the City. Any civil penalties levied shall be levied on the City.

6. The City shall contractually require the EPC contractor and all independent contractors and subcontractors involved in the construction and operation of the Facility to comply with all applicable laws and regulations and with the terms and conditions of the Amended Site Certificate. Such contractual provision shall not operate to relieve the City of responsibility under the Amended Site Certificate.

#### **IV. D. Financial Assurance**

For conditions 3, 4 and 5 in section IV.D. of this Amended Site Certificate, the index by which the future value of money shall be converted to 1996 or 1997 dollars shall be the Implicit Price Deflator for the Gross Domestic Product as published by the U.S. Bureau of Economic Analysis of the Department of Commerce or a successor agency. These values are published annually each February in the "Economic Report of the President".

1. The City will not, without the Council's prior written consent, amend the Bond Indenture in a manner that would prevent the Project from using the Construction Fund or the Reserve and

Contingency Fund to pay for termination or decommissioning costs.

2. The City will not, without the Council's prior written consent, amend the Bond Indenture to authorize a Reserve and Contingency Fund Requirement of less than \$2.5 million.

3. The City agrees to cause the Project to maintain either in the Reserve and Contingency Fund, or in a separate fund established to provide for termination or decommissioning costs, a balance of cash and Investment Securities equal to the Termination Fund Amount to be available to pay costs of termination or decommissioning, including Site restoration, of the project. For the single CT Energy Facility, the Termination Fund Amount shall be \$5 million in 1996 dollars. For the two CT Energy Facility, the Termination Fund Amount shall be \$6.85 million in 1997 dollars. Amounts in the two funds may vary, but their combined value shall be the Termination Fund Amount. Funds in the separate fund established by this condition shall be only invested in Investment Securities authorized under the Bond Indenture. The City shall be responsible for managing the separate fund. The City may arrange for the Trustee to manage the separate fund or the City may manage the separate fund as it manages its other bond or capital project funds.

4. The Reserve and Contingency Fund may be drawn upon by the Project for the following purposes i) to make up deficiencies in the Bond Reserve Fund, ii) payment for costs of renewals, extraordinary repairs, replacements, modifications, additions, betterments for the Project, and the payment of the costs of any decommissioning or termination of the Project, or iii) the payment of the extraordinary operation and maintenance costs of the Project and the cost of preventing or correcting any unusual loss or damage (including major repairs) to the Project. The separate fund established under condition IV.D.3. may be drawn upon by the Project for only termination or decommissioning costs, including Site restoration. The total of the Reserve and Contingency Fund and the separate fund may not be drawn below the Termination Fund Amount unless, prior to such draw, the City causes to be delivered to the Council a performance and payment bond, surety bond or letter of credit in the amount necessary to provide that the balance of cash, Investment Securities and such bond(s) or letter of credit equals the Termination Fund Amount. In addition, such bond(s) or letter of credit must be reasonably satisfactory to the Office of Energy.

5. In lieu of funding part or all of the Termination Fund Amount requirement with cash or Investment Securities, the City may cause a performance and payment bond, surety bond or letter of credit to be delivered to the Council which bond(s) or letter of credit must be reasonably satisfactory to the Office of Energy.

#### **IV. E. Land Use**

1. The KCP shall mitigate visual impact of the Facility as viewed from Highway 97 by using neutral color schemes and landscaping. (Klamath County Conditional Use Permit 29-95, as amended in December 1997)

2. Access to the Energy Facility Site for construction and operation shall be from Highway 97 and shall be subject to Oregon Department of Transportation approval. In the event such approval is not obtained and the applicant proposes to access the Energy Facility Site through West Klamath such access shall be subject to hearing and review by the County Land Use Planning Hearings Officer on the limited issue of access only. (Klamath County Conditional Use Permit 29-95, as amended in December 1997) Such review by the Hearings Officer does not eliminate the need for Council review, if otherwise required.

3. Any performed work or construction on Oregon Department of Transportation (ODOT) right-of-way as a result of the KCP shall require application and permits from ODOT. (Klamath County Conditional Use Permit 54-97 and City of Klamath Falls' Conditional Use Permit 6-CUP-96)

4. The KCP shall obtain all necessary permits from the City of Klamath Falls and Klamath County prior to operation and shall comply with all applicable codes and regulations. (City of Klamath Falls' Conditional Use Permit 6-CUP-96)

5. Any changes in or alternations to the electric transmission line corridor or alignment on lands within the City of Klamath Falls' jurisdiction shall be approved by the City of Klamath Falls' Planning Division prior to construction. (City of Klamath Falls' Conditional Use Permit 6-CUP-96) Such review by the City Hearings Officer does not eliminate the need for Council review, if otherwise required.

#### **IV. F. Structural**

1. The KCP shall maintain the stability of the existing fill slopes by ensuring that surface water runoff is controlled and directed away from the slopes and by locating heavy loads and foundations at least 20 feet from the crest of existing fill slopes. (ASC, page G-17, G.1)
2. The KCP shall locate transmission line structures away from rockfall areas or design the structures to withstand rockfalls. (ASC, page G-17, G.1)
3. The foundations of the KCP Energy Facility structures shall be supported on bedrock or, in areas which are susceptible to settlement, Energy Facility foundations and pipelines shall be placed on engineered fill. (ASC, page G-17, G.2)
4. Transmission line structure and pipeline locations that could be subject to settling, slumping or liquefaction shall be tested for soil properties prior to structure and pipeline installation.
5. If methane gas is encountered during construction of the KCP, the KCP shall construct a permeable layer of gravel beneath foundations or pavements to vent methane and prevent the build-up of hazardous quantities of methane. (ASC, page G-18, G.3)
6. As part of final design, the KCP shall complete the geotechnical work as set forth in the ASC, pages G-18 and 19, with consideration to the comments of DOGAMI in its May 16, 1996 and December 2, 1996 letters to the Office which are in appendix D to this Amended Site Certificate.
7. The KCP shall conduct a "shake" analysis as part of its further geotechnical work if the Energy Facility is not sited on bedrock. (DOGAMI May 16, 1996 letter to the Office)
8. The KCP shall provide the completed site-specific geotechnical report, including seismic hazards, to the Office and to DOGAMI as soon as it is available. (DOGAMI May 16, and December 2, 1996 letters to the Office)

9. If the detailed geotechnical work reveals evidence that is not as described in the ASC, the Facility design shall be revised as necessary to comply with applicable Oregon Building Code requirements. If pre-construction seismic analysis reveals features unique to the Energy Facility Site that justify enhanced seismic design, safety structures critical to public health and safety shall be designed in consultation with the Building Codes Division of the Department of Consumer and Business Services (DCBS), subject to approval by the Office. Critical structures include hazardous material storage areas and control rooms.

10. Except as provided above, the design and construction of the Facility shall be consistent with Seismic Zone 3 requirements, and in compliance with the applicable laws and regulations administered by the DCBS.

11. During construction and prior to operation of the Facility, the City shall obtain all state and local building permits necessary for the construction and operation of the Facility.

#### **IV. G. Retirement and Site Restoration**

1. The KCP shall not dispose of hazardous wastes on the Site, store hazardous wastes on the Site for more than 90 days, or dispose of non-hazardous wastes on the Site. Any storage on the Site of non-hazardous wastes shall comply with applicable federal, state and local regulations. (RMI 12/20/96 letter to the Office)

2. The KCP shall contain accidental spills at the Energy Facility Site on-site by containment structures and procedures designed to minimize or prevent any off-site releases. (RMI 12/13/96 letter to the Office)

3. In the event that construction of the Facility is begun but not completed, or the Facility is closed permanently before the end of its useful life, the Site shall be restored to a useful condition.

#### **IV. H. Soil Protection**

1. During construction of the Facility, the KCP shall manage stormwater runoff in compliance with a NPDES construction

permit.

2. During construction of the Facility the KCP shall minimize erosion by scheduling construction of the Energy Facility, transmission line and pipelines during drier periods to the extent practicable, by properly controlling surface water runoff and by revegetating disturbed areas during and following construction. (ASC, page G-18, G.4 and page N-13, N.5)

3. During construction of the Facility the KCP shall avoid or control erosion hazards associated with Stukel-Capona loams and Lorella very stony loam by scheduling construction in these soils, to the extent practicable, in drier months, and by using erosion control techniques such as water bars, siltation fences and straw bales during construction. (ASC, page N-13, N.5; RMI 10/9/96 letter to the Office)

4. During construction of the Facility the KCP shall control the potential for wind erosion in Tweeters silt loam by the use of geotextile blankets and hydroseed mixtures with tackifying agents. The KCP shall control the potential for wind erosion in Tulana silt loam by using wood chips from the Collins facility or other appropriate means. (ASC, page N-12, N.6; RMI 10/9/96 letter to the Office)

5. The KCP shall develop, in consultation with appropriate agencies, an erosion control plan for construction activities which incorporates Best Management Practices. The KCP shall also develop a post-construction re-vegetation plan. This plan shall address restoration, to the extent practicable, of natural vegetation affected by Facility construction, and shall minimize erosion potential in affected areas over the life of the KCP. The KCP shall develop and implement these plans substantially as described in the ASC, page N-12, condition N.2 and in RMI's 10/9/96 letter to the Office, page 1 which are in appendix C and appendix D, respectively, to this Amended Site Certificate.

6. The KCP shall restore areas disturbed during construction but not required for Facility structures so as to reduce potential for soil erosion from rain or wind.

7. The KCP shall locate its transmission line structures so as to avoid steeper slopes wherever practicable. (ASC, page G-9; RMI 12/13/96 letter to the Office)

8. During operation of the Facility, the KCP shall direct stormwater runoff at the Energy Facility Site to an on-site

retention-evaporation pond. During operation, the KCP shall not discharge or otherwise release runoff from the Energy Facility Site. If stormwater runoff is used for on-site cooling tower makeup, cooling tower blowdown shall be discharged as wastewater to a sanitary sewer for delivery to the SSWTP.

9. Access for transmission line and pipelines construction and maintenance shall utilize existing roads wherever practicable and temporary access roads shall only be constructed where there is no existing access road.

#### **IV. I. Protected Areas**

There are no conditions specifically related to protected areas.

#### **IV. J. Fish and Wildlife Habitat**

1. The KCP shall operate its cooling tower system so as to comply with applicable limits for total dissolved solids (TDS) in KCP's industrial wastewater discharge permit, and in no event shall the TDS level in KCP's cooling tower system exceed 3,360 parts per million in the cooling water on an annual average basis.

2. The KCP shall locate facilities to maximize the use of existing utility corridors and previously disturbed and currently developed areas, whenever feasible. (ASC, page N-12, N.1)

3. The KCP shall restore areas of native plant communities that are temporarily disturbed during construction to pre-disturbance conditions. (ASC, page N-12, N.2)

4. The KCP shall mitigate for the permanent loss of Category 3 habitat by creating habitat or restoring lost habitat at a 1:1 ratio to that lost, substantially as described in the ASC, page N-12, condition N.3 which is in appendix C to this Amended Site Certificate. The KCP shall coordinate these efforts with the ODFW as requested in their December 12, 1996 Agency Report to the Office, page 5 which is in appendix D to this Amended Site Certificate.

5. The KCP shall, as soon as practicable after Project financing, and before the completion of construction, provide the funds necessary, not to exceed \$15,000 in 1998 dollars, to

repair the Haymaker Dike located in the ODFW Klamath Wildlife Area. The KCP shall coordinate this funding with the ODFW.

6. The KCP shall manage its discharge of wastewater to a sanitary sewer for delivery to the Spring Street Wastewater Treatment Plant (SSWTP) so as to comply with applicable limitations for temperature in the industrial wastewater discharge permit for the KCP, and any related provisions in the Reclaimed Water Use Plan for the KCP as required under the City's SSWTP NPDES permit. (ODFW Agency Report, December 12, 1996; RMI 1/20/97 letter to DEQ)

7. The KCP shall not disturb the bed or banks of the Klamath River during construction, operation or retirement. No direct water withdrawals from the Klamath River shall occur. The Energy Facility shall not directly discharge wastewater into the Klamath River.

#### **IV. K. Threatened and Endangered Species**

1. The KCP shall manage its consumption of effluent from the SSWTP and its wastewater discharge to a sanitary sewer for delivery to the SSWTP such that the Facility's net consumption of effluent is no more than 3.65 cubic feet per second (1,640 gallons per minute) on an annual average basis (8,760 hours). Net consumption means the difference between the amount of effluent provided by the SSWTP to the KCP and the amount of wastewater discharged to a sanitary sewer for delivery to the SSWTP from the KCP.

#### **IV. L. Scenic and Aesthetic Values**

1. The KCP shall paint the Energy Facility in a neutral color to help it blend naturally into the hill to the north. (ASC, page S-6, S.1)

2. The KCP shall plant low-maintenance trees such as ponderosa pine, juniper and black cottonwood around the perimeter of the Energy Facility to aid in visually screening the Energy Facility. (ASC, page S-6, S.1)

3. The KCP shall locate its transmission line structures so as to reduce their visual impacts. (ASC, page S-6, S.2)

4. The KCP shall utilize H-frame wood pole structures for its

transmission line to the greatest extent practicable. (ASC, page S-6, S.2)

5. The KCP shall limit and direct outdoor nighttime lighting to the extent necessary to maintain safe conditions so as to minimize disturbance to the nearby residential area.

#### **IV. M. Historic, Cultural and Archaeological Resources**

1. The KCP shall design, construct and operate its facilities located on Collins property so as to avoid adverse impact to those qualities of the Weyerhaeuser archaeological site (OR-KL-40) which make it eligible for listing on the National Register of Historic Places. (ASC, pages T-8, 10, T.3; RMI 10/2/96 letter to the Office)

2. Prior to construction of the transmission line and cooling water supply pipeline a qualified individual shall flag the perimeter of each of the three archaeological sites, Cogen 1, Cogen 2 and Cogen 3. The KCP shall design, construct and maintain the transmission line and cooling water supply pipeline so as to avoid disturbance to any of these sites. If disturbance to any of these sites is unavoidable, the City shall obtain the necessary permit from the State Historic Preservation Office prior to beginning any activity that would disturb the site. (RMI 10/2/96 letter to the Office)

3. If archaeological sites or objects are found during construction of the KCP or related Project activities, the KCP shall halt earth-disturbing activities in the vicinity of the find. The KCP shall notify the SHPO, the the Office and the Klamath Tribe and a qualified archaeologist shall evaluate the find and recommend appropriate action after consultation with the SHPO, the the Office and the Klamath Tribe. (ASC, page T-10, T.2) The KCP shall not restart work in the affected area until it has complied with the applicable permit requirements administered by the SHPO currently set forth in OAR chapter 736, division 51.

4. Prior to construction, the KCP shall coordinate with the Klamath Tribes to arrange for Tribal monitors to be present during ground-disturbing activities associated with construction of the KCP. The KCP shall reasonably compensate Tribal monitors. (Klamath Tribes letter to the Office, undated, received by the Office June 1996)

#### **IV. N. Recreation**

There are no conditions specifically related to recreation.

#### **IV. O. Socio-Economic Impacts**

1. The KCP shall use water from the City's municipal water supply system to meet its service and potable water requirements. (ASC, pages B-4 and U-4; Fig F-1; Fig B-1)

2. The City shall coordinate working hours of construction crafts with other industries in the area, to the extent feasible, to minimize traffic congestion. (ASC, page U-6)

3. The KCP shall provide an adequate parking area for about 300 vehicles during construction. (ASC, page U-6) The location of this construction parking area shall be on Collins property as shown in the ASC, Fig. X-2, or in the RFA, Fig. X-1, which are in appendix C to this Amended Site Certificate.

4. Access to the Energy Facility Site during construction and operation shall be from U.S. Highway 97 onto a private road on Collins property as described in the ASC, pages U-6 and 7 which are in appendix C to this Amended Site Certificate.

5. Prior to construction of the Energy Facility, the City shall obtain an Approach Road Permit from the Oregon Department of Transportation (ODOT) to connect the construction and operation access road for the Energy Facility Site into U.S. Highway 97 at the location described in the ASC, pages U-6 and 7. The City shall be responsible for the costs of any highway improvements required by the ODOT to allow this connection.

6. The KCP Energy Facility shall include a fire protection system substantially as described in the ASC, page U-9 which is in appendix C to this Amended Site Certificate.

#### **IV. P. Waste Minimization**

1. Prior to construction of the Facility, the KCP shall develop a solid waste reduction and recycling program for hazardous and non-hazardous solid wastes for construction and operation

substantially as described in the ASC, page V-1 which is in appendix C to this Amended Site Certificate.

2. The KCP shall reuse or recycle hazardous and non-hazardous solid waste generated during construction to the extent reasonably practicable and substantially as described in the ASC, pages F-1, U-4, and V-1 which are in appendix C to this Amended Site Certificate.

3. The KCP shall reuse or recycle hazardous and non-hazardous solid waste generated during operation to the extent reasonably practicable and substantially as described in the ASC, pages U-5, and V-2 and 3 which are in appendix C to this Amended Site Certificate.

4. Prior to construction of the Facility, the KCP shall develop a wastewater minimization and reuse plan for construction and operation substantially as described in the ASC, page V-1 which is in appendix C to this Amended Site Certificate.

5. The KCP shall minimize and reuse wastewater generated during construction to the extent reasonably practicable.

6. The KCP shall minimize and reuse wastewater generated during operation to the extent reasonably practicable and substantially as described in the ASC, pages F-2 through 3, and V-3 and 4 which are in appendix C to this Amended Site Certificate.

7. During operation, the KCP shall minimize the amount of sanitary wastewater by using water flow restricting devices on bathroom and locker room sinks and showers, and by using low water consumption water closets. (ASC, V-3)

8. KCP water treatment demineralizers shall use programmable logic controls set to maximize resin efficiency so as to reduce overall water consumption during resin regeneration and backwashing. (ASC, V-3)

9. KCP HRSG boiler blowdown shall be used as makeup water to the cooling tower. KCP cooling tower blowdown shall be reduced by automating the chemical treatment and blowdown system to allow the cooling tower to operate at the highest practical number of cycles of concentration. (ASC, F-3, V-3)

10. During operation of the KCP, waste materials shall be

contained on the Energy Facility Site, within the Site perimeter fence, and screened from view from the nearby residential area.

#### **IV. Q. Noise**

1. The KCP shall restrict construction activities which produce loud noise levels to the hours between 7:00 a.m. and 10:00 p.m. to reduce the potential for annoyance of nearby residences and maintain compliance with applicable DEQ noise requirements. (ASC, page BB-5, BB.2)

2. The KCP shall place its combustion turbine(s) and associated electrical generator(s), and the steam turbine and associated electrical generator inside an acoustically insulated building.

3. The KCP shall, within six months of the beginning of commercial operation, retain a qualified noise specialist to measure actual noise levels associated with KCP Energy Facility operation, at the nearby residential area and at the nearest edge of the Klamath Wildlife Refuge across the Klamath River, to determine if actual noise levels comply with (are within the levels specified in) applicable noise regulations in OAR 340-35-035(1)(b). If actual noise levels do not comply with applicable DEQ regulations, the KCP shall take those actions necessary to comply with the applicable regulations as soon as practicable.

4. The KCP shall design the HRSG(s) and stack(s) with resonant frequency above the lowest natural frequency of the exhaust from the combustion turbine(s).

5. The KCP shall consult with Klamath County to minimize impacts of construction noise.

6. The KCP shall design, construct and operate the 230 kv transmission line so as to comply with applicable noise regulations in OAR 340-35-035(1)(b).

7. The KCP shall specify a cooling tower such that the actual noise levels associated with operation of the KCP comply with the applicable noise regulations in OAR 340-035-035(1)(b).

#### **IV. R. Wetlands**

There are no conditions specifically related to wetlands.

#### IV. S. Water Rights

The conditions in section IV.S. relate to a new water permit which the City shall obtain from the Oregon Water Resources Department (Department) for operation of the Energy Facility.

1. The holder of the permit shall be the City of Klamath Falls.
2. The source of the water shall be a well in the Klamath River basin.
3. The purpose or use of the water shall be for municipal use.
4. The maximum rate of use shall not exceed 1.34 cubic feet per second taken together with Collins certificate 48602.
5. The period of use shall be year round.
6. The date of priority for the permit is October 28, 1996.
7. The point of diversion location is the NW 1/4 of the NE 1/4 of section 24 in Township 39S, Range 8E, W. M.; 700 feet south and 1970 feet west from the NE corner of section 24.
8. The place of use is located as follows:  
  
NE 1/4 SW 1/4; SW 1/4 SW 1/4; SE 1/4 SW 1/4; NE 1/4 SE 1/4;  
NW 1/4 SE 1/4; SW 1/4 SE 1/4; SE 1/4 SE 1/4; SECTION 13 and  
NE 1/4 NE 1/4; NW 1/4 NE 1/4; NE 1/4 NW 1/4; SECTION 24;  
TOWNSHIP 39 SOUTH, RANGE 8 EAST, W.M.  
  
NE 1/4 SW 1/4; NW 1/4 SW 1/4; SW 1/4 SW 1/4; SE 1/4 SW 1/4;  
SECTION 18; TOWNSHIP 39 SOUTH, RANGE 9 EAST, W.M.
9. The amount of water used under this right, together with the amount secured under any other right existing for the same lands is limited to a total diversion of 52.22 cubic feet per second - or - a lesser amount if delineated in the City's Water Management and Conservation Plan.
10. Measurement, recording and reporting conditions:

- a. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Water Resources Department Director (Director), to measure the amount of water used under this permit. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used under this permit each month and shall submit a report which includes the recorded water use measurements to the Water Resources Department annually or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water use information, including the place and nature of use of water under the permit.
- b. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

11. Use of water under authority of this permit may be regulated by the Water Resources Department if analysis of data available after the permit is issued discloses that the appropriation will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway in quantities necessary for recreation, fish and wildlife in effect as of the priority date of the right or as those quantities may be subsequently reduced.

12. The water user shall develop a plan to monitor and report the impact of water use under this permit on water levels within the aquifer that provides water to the permitted well(s). The plan shall be submitted to the Water Resources Department within one year of the date the permit is issued and shall be subject to the approval of the Department. At a minimum, the plan shall include a program to periodically measure static water levels within the permitted well(s) or an adequate substitute such as water levels in nearby wells. The plan shall also stipulate a reference water level against which any water-level declines will be compared. The water user shall in no instance allow excessive decline, as defined in the Oregon Water Resources Commission rules, to occur within the aquifer as a result of use under this permit.

13. If at any time the well or its use acts as a conduit for groundwater contamination or allows loss of artesian pressure, the Water Resources Department may require that the land owner repair the well in accordance with the current well construction standards.

14. Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test, performed within the last ten years, meeting the Water Resources Department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

15. Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

16. This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

17. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged

land-use plan in effect on the date this Amended Site Certificate is executed.

18. The use of water shall be limited when it interferes with any prior surface or ground water rights.

19. Actual construction of the well shall begin within one year from date the Water Resources Department issues the permit. Unless the Water Resources Department grants an extension, construction of the means of conveyance to the Energy Facility Site shall be completed within five years of the date the Water Resources Department issues the permit. Unless the Water Resources Department grants an extension, complete application of the water to the use shall be made within five years of the date the Water Resources Department issues the permit.

#### **IV. T. Public Health and Safety**

1. The KCP shall design and operate its cooling tower

substantially as described in the ASC, Table M-1 on page M-4, or in the RFA, Table M-1, which are in appendix C to this Amended Site Certificate.

2. The KCP shall monitor, in accordance with its Reclaimed Water Use Plan approved by DEQ, the effluent it receives from the SSWTP for the presence of pathogens. The KCP shall operate its cooling tower water system in accordance with the Reclaimed Water Use Plan and the industrial wastewater discharge permit for the Facility so as to prevent public health hazards from cooling tower drift (aerosols).

**V. MATTERS NOT ADDRESSED IN OR GOVERNED BY THIS AMENDED SITE CERTIFICATE**

**V. A. Federally-Delegated Programs ORS 469.503(3)**

The following programs are not within the Council's jurisdiction and are not governed by this Amended Site Certificate because they are federally delegated programs:

(1) The Air Contaminant Discharge Permit program administered by DEQ, which includes, but is not limited to, the federally delegated new source review requirements of the Clean Air Act and the Prevention of Significant Deterioration (PSD) program. This authority is in ORS Chapter 468A; OAR Chapter 340, Divisions 20, 21, 22, 25, and 31;

(2) The National Pollutant Discharge Elimination System (NPDES) permit program administered by DEQ - Water Quality Division, which regulates and permits stormwater runoff and industrial wastewater discharges to public waters, directly or indirectly through discharge to a local sanitary sewer;

(3) The program regulating the design, operation, monitoring and removal of underground storage tanks that contain certain toxic and hazardous materials, including petroleum products, administered by DEQ, under ORS Chapter 466; OAR Chapter 340, Division 150; and the program relating to the generation, treatment, storage and disposal of hazardous wastes, administered by DEQ, under ORS Chapter 466; OAR Chapter 340, Divisions 100 through 113;

**V. B. Requirement Which Do Not Relate to Siting ORS 469.401(4)**

The following programs are not within the Council's jurisdiction and are not governed by this Amended Site Certificate because the programs address design-specific construction or operating standards and practices not related to siting:

(1) The Oil Spill Contingency and Prevention Plan program, administered by DEQ Water Quality Division under ORS 468B and OAR Chapter 340, Division 47, which regulates the transport, storage, handling and spill control and prevention of petroleum products;

(2) Regulations of building, structure design and construction practices by the Oregon Building Codes Division under ORS Chapters 447, 455, 460, 476, 479, and 480; OAR Chapter 918, Divisions 225, 290, 301, 302, 400, 440, 460, 750, 770, and 780;

(3) Various programs addressing fire protection and fire safety and the storage, use, handling, and emergency response for hazardous materials and community right to know laws for hazardous materials, administered by the Oregon State Fire Marshal's Office, under ORS Chapters 453, 476, and 480; OAR Chapter 837, Divisions 40 and 90;

(4) The program addressing design and safety standards for natural gas pipelines and electric transmission lines administered by the Oregon Public Utilities Commission, Safety Section under ORS Chapter 757; OAR Chapter 860, Division 24;

(5) Regulations on the size and weight of truck loads on state and federal highways administered by the Oregon Department of Transportation under ORS Chapter 818; OAR Chapter 743, Division 82;

(6) The program regulating the possession, use and transfer of radioactive materials administered by the Oregon State Health Division (OSHD) under ORS Chapter 453; OAR Chapter 333, Divisions 100-119;

(7) Regulations of domestic water supply systems regarding potability administered by OSHD under ORS Chapter 448;

(8) Permits required from the Oregon Department of Transportation (ODOT) to "connect" the construction and operation access road for the KCP into a state highway;

(9) Permits required from ODOT to place a structure within, or to cross, a state highway right-of-way;

(10) An Industrial Wastewater Discharge Permit from the City of Klamath Falls to discharge KCP wastewater to the City's Spring Street Wastewater Treatment Plant; and

(11) Building permits required and administered by Klamath County.

#### **VI. AMENDMENT OF AMENDED SITE CERTIFICATE**

The City and the Council recognize that, because of the length of time that may pass between the date on which this Amended Site Certificate is executed and the date on which construction will commence, and that will pass between the time construction is commenced and the Facility is retired, it may be necessary to amend this Amended Site Certificate.

Amendments shall be made in accordance with OAR Chapter 345, division 27 or Council procedural rules regarding amendments in effect at the time the amendment is sought.

#### **VII. SUCCESSORS AND ASSIGNS**

This Amended Site Certificate, or any portion thereof, may not be transferred, assigned, or disposed of in any other manner, directly or indirectly, except in compliance with OAR 345-27-100 or Council rules in effect at the time such action is sought.

#### **VIII. SEVERABILITY AND CONSTRUCTION**

If any provision of this Amended Site Certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Amended Site Certificate did not contain the particular provision held to be invalid.

#### **IX. GOVERNING LAW AND FORUM**

This Amended Site Certificate shall be governed by the laws of the State of Oregon.

Any litigation or arbitration arising out of this Amended Site

Certificate shall be conducted in an appropriate forum in Oregon.

**IN WITNESS WHEREOF**, this Amended Site Certificate has been executed by the State of Oregon, acting by and through its Energy Facility Siting Council, and the City of Klamath Falls.

\_\_\_\_\_  
Chair, Energy Facility Siting Council

Date \_\_\_\_\_

\_\_\_\_\_  
On behalf of the applicant,  
James R. Keller  
City Manager  
City of Klamath Falls, Oregon

Date \_\_\_\_\_

\_\_\_\_\_  
On behalf of the applicant,  
Todd Kellstrom  
Mayor  
City of Klamath Falls, Oregon

Date \_\_\_\_\_

KLAMATH COGENERATION PROJECT

AMENDED SITE CERTIFICATE

APPENDICES

- Appendix A. Application for Site Certificate: Figure B-3 "Station Arrangement"; Request for Amendment: Figure B-3, "Station Arrangement".
- Appendix B. Application for Site Certificate: Figure C-1 "Transmission Line/Pipeline Routes"
- Appendix C. Application for Site Certificate: pages B-6, 7, 9, 10, 13 and 14; F-1, 2, 3, 6 and 7; M-4; N-12; U-4, 5, 6, 7 and 9; V-1, 2, 3 and 4; Figure X-2; Request for Amendment: pages B-2 through 8; Tables M-1, M-2, M-3 and Figure M-1; Table O-1; Figure X-1.
- Appendix D. Correspondence:
- RMI October 9, 1996 letter to the Office, page 1.  
RMI January 2, 1997 letter to the Office, page 2, and Figure B-1 and Figure F-1.  
Department of Geology and Mineral Industries (DOGAMI) December 2, 1996 and May 16, 1996 letters to the Office, including ASC pages G-18 and 19.  
Building Codes Division (BCD) December 13, 1996 Interoffice Memo to M. Long from R. Tamerhoulet.
- Appendix E. Oregon Revised Statutes, Chapter 469, 1997 edition.
- Appendix F. House Bill 3283, Enrolled, effective June 26, 1997.
- Appendix G. Oregon Administrative Rules, Chapter 345, Divisions 1, 22, 23, 24, 26, 27 and 29.