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BEFORE THE ENERGY FACILITY SITING COUNCIL DEPARTMENT OF ENERGY  
OF THE STATE OF OREGON

In the Matter	)	FINAL ORDER #1
of the Site	)	APPROVING IN PART
Certificate for the	)	PGE'S REQUEST FOR REVISIONS
Boardman Coal Plant	)	TO ENVIRONMENTAL MONITORING
	)	PROGRAMS FOR THE BOARDMAN
	)	COAL PLANT

**I. Summary**

On February 11, 2004, Portland General Electric (PGE) submitted a request to the Energy Facility Siting Council (Council) for changes to environmental monitoring programs required under the "Thermal Power Plant Site Certification Agreement for the Boardman Site." The changes include:

- Request for administrative changes to two Boardman plant (Boardman) environmental monitoring programs.
- Request for elimination of or revisions to several of Boardman's monitoring requirements under the two monitoring programs.
- Request to include as part of Boardman's environmental monitoring requirements those conditions PGE has agreed to meet under a separate conservation agreement.

Copies of PGE's proposed Water Quality Monitoring and Terrestrial Monitoring programs, incorporating the proposed changes, are attached as part of PGE's request in Attachment A. Although PGE did not explicitly lay out its reasons in its request for making the changes, PGE later clarified that the changes are intended to use decades of data to make the monitoring programs more efficient, more relevant to current environmental concerns, and more cost effective.

While PGE stated in its request that Department of Energy (Department) staff could approve the request, PGE later agreed with the Department that the request requires Council approval. However, under Boardman's site certificate, the request does not require a formal amendment to the Site Certificate.

Based on the discussion below, the Department recommended in a draft order dated May 21, 2004, that the Council approve PGE's request for changes to its mandated environmental monitoring programs as described in the draft order and accept the revised Water Quality

Monitoring and Terrestrial Monitoring programs.

On June 3, 2004, the Council met by telephone to consider the draft order. After public input and Council discussion, council members unanimously voted to approve the draft order in part. The Council then considered a motion to approve or table the requested revisions, as follows:

Approve part 1 in its entirety, approve part 2 in its entirety, table part 3, approve part 4a, table part 4b and approve part 4c. The motion carried by a vote of 5 to 1, with one member absent.

This Final Order covers only the issues specifically approved as noted above. Other requests have been postponed for further consideration. The Council asked staff to prepare a separate draft order on the tabled requests for separate consideration at another meeting.

## **II. Site Certificate Background**

On March 24, 1975, PGE received a site certificate to build and operate three thermal power plants located in Morrow County, Oregon. PGE placed one 550 MW coal-fired plant into service on August 3, 1980. Because of plant improvements over the years, the plant now operates at up to 600 MW.

The site certificate is governed by rules in effect in 1975. It has been amended seven times:

- Amendment No. 1: On August 30, 1977, the Governor approved a request to relocate a railroad spur track, a barge basin access road, a 500-kv transmission line and a 230-kv transmission line.
- Amendment No. 2: On February 13, 1978, the Council approved certain conditions for the construction of Carty Reservoir.
- Amendment No. 3: On August 1, 1979, the Council added the requirement to evaluate the radiological impact on the environment of coal ash. (The site certificate was subsequently amended to remove this requirement. See description below of Amendment No. 7.)
- Amendment No. 4: On July 11, 1980, the Council added water quality requirements for the newly built Carty Reservoir.
- Amendment No. 5: On June 15, 1981, the Council changed the averaging time for air emissions calculations. (The site certificate was subsequently amended to remove this requirement. See description below of Amendment No. 7.)
- Amendment No. 6: On December 16, 1988, the Council approved the relocation of access to Tower Road to avoid conflicts between the existing road and Boeing activity.
- Amendment No. 7: On March 22, 1994, the Council eliminated provisions allowing the construction of two additional plants at the Boardman Site and consolidated into one document those provisions from earlier amendments that apply to plant operation. It also deleted air quality limits contained in the Site Certificate because air quality is regulated separately under a federal permit managed by the Oregon Department of Environmental Quality. It also relieved PGE of radiological monitoring requirements required in the Site Certificate because data demonstrated that such monitoring was no longer necessary.

In addition, on May 9, 2003, the Council issued an order that relieved PGE of the requirement to perform chemical monitoring of soil and vegetation. The change did not require an amendment of the Site Certificate.

### **III. Monitoring Program Requirement**

PGE's Boardman site certificate requires compliance with the Council's rules in effect in 1975. In particular, the site certificate requires compliance with what was then OAR 345-26-060, which reads in part:

The site certificate holder shall initiate and maintain environmental and effluent monitoring of the sites, thermal power plants, and associated facilities. Specific plans for the performance, modification, and reporting of these monitoring programs shall be reviewed and concurred in by the appropriate state agencies. All program plans and reports as listed below shall be provided to the Council. The Council, after consultation with the appropriate state agency, may approve or modify those plans.

The "program plans and reports listed below" include:

- A monitoring plan for fish screening efficiency at the pumping plant to be developed and submitted to the Fish and Wildlife Commission for concurrence. OAR 345-26-060(2).
- A monitoring plan for gauging the impact of any plant-related discharges on receiving water bodies to be developed and submitted to the Department of Environmental Quality for concurrence. OAR 345-26-060(3).
- A monitoring plan to determine whether groundwater quality is being adversely affected by the plant to be developed and submitted to the State Engineer and the Department of Environmental Quality for concurrence. OAR 345-26-060(5).
- A monitoring plan to determine any impact on aquatic and terrestrial ecology to be developed and submitted to the Fish and Wildlife Commission for concurrence. OAR 345-26-060(7).
- A monitoring plan to determine any impact on soil and vegetation (including crops) to be developed and submitted to the Department of Environmental Quality for concurrence. OAR 345-26-060(12).

### **IV Request for Revisions**

#### **1. Administrative Changes**

##### **(a) Reorganization of Programs**

PGE currently performs environmental monitoring under two separate programs: the Ecological Monitoring Program and the Groundwater Monitoring Program. The Ecological Monitoring Program now covers water quality for Boardman's Carty Reservoir and terrestrial monitoring. The Groundwater Monitoring Program now covers groundwater quality. PGE proposes reorganizing these two programs into a Water Quality Monitoring Program, to cover water quality monitoring, and a Terrestrial Monitoring Program, to cover wildlife and vegetation monitoring. The request is intended to better organize similar monitoring components.

The Council finds that the requested changes to reorganize the program will result in efficiencies without losing effectiveness of the monitoring and approves the reorganization of the environmental monitoring programs as described.

(b) Moving Annual Report Dates

PGE currently prepares annual reports for its environmental monitoring programs based on an October-to-September time period that reflects Boardman's initial operation date. For consistency with other reporting due dates, PGE proposes to report annually based on a calendar year with separate reports issued for the water quality and terrestrial programs.

The Council approves the change to a calendar year schedule to allow consistency across reporting due dates and orders that PGE shall submit its next environmental monitoring program reports in January 2005, covering the time period from October 2003 to December 2004.

2. Groundwater Monitoring

PGE currently monitors groundwater quality to determine impact from any leachate from its ash disposal site and to ensure limits are met for chemicals present in its reservoir through the return of plant cooling water. PGE provides an annual report on groundwater quality to the Department of Energy, the Department of Water Resources (as the successor agency to the State Engineer's Office) and the Department of Environmental Quality. The plant has a Water Pollution Control Facilities permit regulated by the Oregon Department of Environmental Quality (DEQ). Monitoring has shown no adverse impact from leaching or reservoir seepage.

(a) Deleting Three Parameters for Groundwater Monitoring

PGE currently monitors groundwater for a variety of parameters required by the site certificate, DEQ requirement/request or plant operation needs. PGE has asked to be relieved of monitoring for turbidity, total suspended solids and ammonia, and DEQ supplied a letter in support of the request. At the April 26, 2004, public meeting, a DEQ representative explained that these three parameters provide little useful data for monitoring groundwater. In most cases, monitoring of turbidity and total suspended solids is more useful in surface water situations, and ammonia generally is not an issue for the ash disposal site.

The Council finds that monitoring of turbidity, total suspended solids and ammonia provides little useful information for determining groundwater impacts from Boardman's ash disposal site and approves PGE's request to eliminate groundwater monitoring for turbidity, total suspended solids and ammonia.

(b) Reducing Monitoring Frequency for Five Parameters

In early discussions with DEQ, PGE proposed being relieved of semiannual monitoring for beryllium, lead, manganese, selenium and vanadium because years of monitoring for these parameters showed no impact to groundwater. DEQ instead requested that PGE

monitor for these parameters once every five years as a precaution.

The Council finds that no environmental harm likely will result from reducing the frequency of monitoring for beryllium, lead, manganese, selenium and vanadium from annually to once every five years and approves PGE's request to perform groundwater monitoring for beryllium, lead, manganese, selenium and vanadium once every five years.

(c) Reducing Frequency of Groundwater Monitoring

PGE currently monitors groundwater by taking samples twice a year. Monitoring has shown no evidence of impact from plant operations, and PGE has asked to reduce sampling frequency to once a year. DEQ supports the request.

The Council finds that no environmental harm likely will result from reducing the sampling frequency of groundwater monitoring from twice a year to once a year and approves PGE's request to reduce groundwater sampling to once a year. The Council will reinstate more frequent groundwater sampling if evidence of new impacts to groundwater quality appears.

(d) Discontinuing Redundant Drinking Water Monitoring

As part of its environmental monitoring for the site certificate, PGE currently performs periodic tests and reports on its drinking water well. However, PGE is also required to monitor the quality of the plant's drinking water by the Drinking Water Program of the Oregon Department of Human Services. PGE is asking to be relieved of the redundant monitoring it now performs on the well as part of the site certificate. It would continue to meet monitoring regulations for the well as required by the Department of Human Services.

The Council finds that redundant monitoring for Boardman's drinking water well is unnecessary and approves PGE's request to eliminate drinking water monitoring required as part of PGE's environmental monitoring for the Boardman site certificate.

### 3. Carty Reservoir

Carty Reservoir is a 1400-acre man-made impoundment that draws water from the Columbia River and provides Boardman with cooling water, fire water and make-up water for the boiler. Boardman returns low-level processed wastewater to the reservoir. The plant has the ability to release some of the reservoir water for irrigation to the adjacent Three Mile Canyon Farms. In return, it also has the ability to draw make-up water from the Farms' Willow Creek pumping station.

PGE currently monitors the reservoir to ensure that the water meets chemical concentration limits set in the site certificate, required by DEQ under a Water Pollution Control Facilities permit, or needed for plant operations. The site certificate contains a list of reservoir water quality parameters for which PGE must test.

(a) Discontinuing Monitoring for Three Parameters:

Under its monitoring programs, PGE now monitors for several reservoir water quality parameters that are not required in the site certificate: total suspended solids, dissolved oxygen and phosphate. PGE is asking to be relieved of monitoring for these parameters. DEQ supports the request. At the April 26, 2004, public meeting, a DEQ representative explained that these three parameters generally are monitored in surface waters of the state. Carty Reservoir is not considered a water body of the state, and monitoring of these parameters provides little useful information for determining impact to the environment.

The Department recommended that the Siting Council find that monitoring Cary Reservoir for total suspended solids, dissolved oxygen and phosphate produces limited useful information for compliance with DEQ rules and the site certificate. The Department also recommended that the Siting Council approve the request for PGE to eliminate monitoring Cary Reservoir water for total suspended solids, dissolved oxygen and phosphate.

After deliberation the Council voted to table requested change 3a pending further investigation.

(b) Discontinue Laboratory Analysis for Two Parameters:

Under its monitoring programs, PGE now samples Cary Reservoir for pH and conductivity and analyzes the samples in laboratory conditions. PGE asked to eliminate laboratory analysis for these parameters and instead rely on field data alone. DEQ supported the request. At the April 26, 2004, public meeting, a DEQ representative explained that field data are preferred over laboratory analysis in testing pH and conductivity because of changes over time that can occur to samples.

The Department recommended that the Siting Council find that laboratory analysis of Cary Reservoir water for pH and conductivity provides no useful information for evaluating the reservoir's water quality. The Department also recommended that the Siting Council approve the request for PGE to eliminate laboratory testing of pH and conductivity.

After deliberation, the Council voted to table requested change 3b pending further investigation.

(c) Revising Locations and Frequency of Cary Reservoir Sampling:

PGE currently performs monthly or quarterly testing of a variety of sites within Cary Reservoir and at Three Mile Canyon Farms' Willow Creek pumping station. However, PGE asserts that most of the reservoir sample sites are not representative of reservoir water quality. Because the plant circulates about 180,000 gallons per minute of reservoir water, PGE states that the sample point most representative of reservoir quality is at the plant intake structure.

PGE proposed monthly sampling only at the plant's intake structure rather than at a variety of sites within the reservoir. It also proposed sampling monthly at Three Mile Canyon Farms' Willow Creek pumping station during months when water is drawn for replacement reservoir water and monthly sampling near the reservoir's withdrawal pumps during months that PGE supplies irrigation water to the Farms.

DEQ supported PGE's assertion that the revisions would allow for better representative sampling of water quality.

The Department recommended that the Council find that monthly water quality sampling at the plant's intake structure provides a more representative sample than current sampling sites provide. The Department also recommended that the Siting Council approve the request for PGE to revise its reservoir water quality monitoring program as proposed.

After deliberation the Council voted to table requested change 3c pending further investigation.

#### 4. Terrestrial Monitoring

Under its terrestrial monitoring program, PGE currently performs monthly aerial photography during the growing season to gauge any impact from the plant on cultivated, natural shrub-steppe and riparian vegetation. The plant also conducts regular surveys for raptors, song birds, mammals and other wildlife species to monitor seasonal abundance and distribution. The surveys place special emphasis on documenting nesting pairs of designated threatened and sensitive species.

Until last year, PGE had conducted chemical testing of soil and vegetation to determine any impact from plant operations. In its May 9, 2003, Order, the Council relieved PGE of the requirement to perform chemical monitoring of soil and vegetation every three years because monitoring data across 20 years had shown no discernable relationship between the concentrations of chemicals in the soil and vegetation and the pattern of Boardman's operations. PGE continues to document any perceptible changes in vegetation communities in conjunction with its bird surveys and notes populations of noxious weeds for removal.

##### (a) Reducing Frequency of Raptor Surveys

PGE has collected data on raptors for more than 20 years with no impacts attributable to plant operations observed. It currently conducts monthly raptor surveys along a designated route on PGE lands. PGE proposes eliminating surveys during the months of February, September, October and November, preserving surveys during the key months for nesting and wintering. The Department of Fish and Wildlife supports the request.

The Council finds that raptor surveys during the months of January, March through August, and December will provide sufficient information for monitoring the health of raptor populations at the Boardman site and approves the PGE's request to reduce the

frequency of raptor surveys as described.

(b) Eliminating Monitoring by Aerial Photography:

For 23 years, PGE has used color and infrared aerial photographs to monitor the impact of plant emissions on cultivated and non-cultivated vegetation with no impact shown other than occasions of fugitive coal dust on nearby lands. The photographs have been archived for future background or baseline information if needed. Because data over the years has shown no impact on soil and vegetation from plant operations, PGE proposes eliminating the aerial photography program and relying instead on available high-resolution satellite pictures if monitoring is needed. PGE also proposes the possibility of reinstating the aerial photography program if needed.

In 2003, when the Siting Council relieved PGE of chemical monitoring of soil and vegetation, the Siting Council relied on materials that included the following paragraph:

“At this time, PGE is retaining the Aerial Photography Program that can show vegetative stress through the Color Infrared film images and compare them with the Color film images. The films are also notarized records that can be compared from month to month or year to year for both rangeland and agricultural areas. The chemical monitoring only checks for specific parameters. The films also show other elements such as land use changes, weather related impacts, agricultural practices, rangeland fires and other factors that are not part of plant operation but might be occurring in the flightlines. PGE now has a film record of over 25 years and has not seen any vegetative stress in the films that might be attributable to plant operations.”

In its letter of concurrence for PGE’s 2003 request to eliminate chemical monitoring of soil and vegetation, DEQ attributed its support for the request in part to the retention of the aerial photography program to detect vegetation stress. In its letter of concurrence for the current request, DEQ did not address the aerial photography program. However, DEQ subsequently clarified in an e-mail to Department staff that DEQ supported PGE’s request for the same reasons discussed below by the Department of Fish and Wildlife.

The Department of Fish and Wildlife also supports the request to eliminate aerial photography, noting that the effectiveness of monitoring vegetation by aerial photography is limited and that actual changes in vegetation might best be measured by other methods. At the April 26, 2004, public meeting, a wildlife biologist with the Department of Fish and Wildlife noted that one of those methods would be PGE’s participation in the conservation program described below in 4(c).

The Department recommended that the Council find that PGE’s aerial photography monitoring program has historically shown no impact from Boardman’s operations on soils and vegetation. The Department also recommended that the Council approve the request for PGE to eliminate its aerial photography program for monitoring soils and



vegetation, with the provisions that the program be reinstated should the Council determine a need for it and that PGE continue its participation in the "Multi-Species Candidate Conservation Agreement with Assurances" (described below). At the June 3, 2004, Council meeting, members of the public opposed PGE's proposal to eliminate the aerial photography program.

As a result, the Council voted to table requested change 4b pending further investigation.

(c) Including New Monitoring Commitments

Separate from its Boardman site certificate, PGE has entered into a voluntary conservation agreement to protect 880 acres of its site for four at-risk species. PGE has joined with the adjacent Three Mile Canyon Farms, The Nature Conservancy, the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service in a "Multi-Species Candidate Conservation Agreement with Assurances" that will protect a total of 23,000 acres of private land for four key species: the Washington ground squirrel, the loggerhead shrike, the ferruginous hawk and the sage sparrow.

According to PGE, the agreement means that Three Mile Canyon Farms and PGE will take actions on their property to conserve species that are on the candidate list or already proposed for protection under the Endangered Species Act. In return, the landowners receive assurances that their conservation measures will not lead to further restrictions on the use of the land if the species are later listed under the Act.

Under the agreement, PGE has committed to the following actions that it proposes to include as part of its environmental reporting requirements for the site certificate:

- Document activities that occurred within the PGE conservation area and known impacts from these activities to the species covered under the agreement or their habitats. (PGE has committed under the agreement to not undertake any development activities within the 880-acre Conservation Area for the duration of the agreement.)
- Document noxious weed species on Boardman plant property, as well as control measures used, timing of the measures and areas treated.
- Document grazing activities, including turn-out and round-up dates, approximate number of animal units grazed, and the areas that were grazed. (PGE has agreed not to allow grazing on conservation acres between April 15 and December 1.)
- Document any fires, including response and control measures used, number of acres burned, and anticipated effects on plant communities, target species and habitat.
- Conduct and document biennial surveys for the Washington ground squirrel.
- Conduct and document vegetation community mapping once every eight years and two years following significant fire at the Boardman Site.

The Council finds that Boardman's participation in the conservation program described above adds value to PGE's environmental monitoring programs for the Boardman plant

and approves the request for PGE to include in its reporting requirements those commitments it has made under the Multi-Species Candidate Conservation Agreement with Assurances

## **V. Public Comment**

The Department received several telephone calls from members of the public concerned about PGE's request to eliminate or revise some components of its environmental monitoring. As a result, the Department held a public meeting in Boardman on April 26, 2004. In attendance were the Department of Energy, Department of Environmental Quality, Department of Fish and Wildlife, Department of Agriculture, Boardman plant representatives and eleven members of the public. The Department also received one letter requesting continued stringent standards for air quality testing for the Boardman plant.

Members of the public appeared concerned mainly about the gradual reduction or removal over the years of environmental monitoring requirements for the plant. Several organic farmers in particular expressed concern about the elimination of the aerial photography program. Others expressed concern that Boardman may be able to "get away with something" once monitoring components were removed. One member of the public expressed concern that some local crops showed signs of effects from increased pollution in the region.


After the Department issued its draft order, it received by a letter dated May 27, 2004, from Larry Clucas, city administrator for the City of Umatilla. Mr. Clucas expressed concern on behalf of the city about any relaxation of monitoring for the Boardman Coal Plant, but he did not include specific facts about how the current requests would "put the citizens of Umatilla and the surrounding at considerable risk." The Department also received by e-mail a letter dated June 1, 2004, from Karen J. Jones and James R. Wilkinson of GASP in Hermiston, Oregon. The Department forwarded the letter by e-mail to Council members on the same day. On the morning of the Council's meeting, the Department received a letter by e-mail and by fax from Carla McLane, planning director for Morrow County. Ms. McLane asked the Council to encourage Boardman to participate in an action plan to address concerns in the Lower Umatilla Basin Groundwater Management Area. Staff read the letter into the record at the Siting Council meeting.

It is understandable that members of the public would like as much information as possible about any effects of Boardman's plant operations on the local environment. However, the monitoring components for which PGE seeks either elimination or reduction have provided decades of data that show no discernable impact from plant operations. Members of the public appeared at the June 3, 2004, Council meeting to object to PGE's proposed changes. Although few facts were presented to support continued monitoring, the Council tabled several of the issues, as discussed above, pending further investigation and recommendation by the Department.

## **VI. Findings and Conclusion**

The Council hereby approves the requested changes to PGE's environmental monitoring programs for the Boardman Coal Plant as specifically set out above and postpones for later action those proposed changes that are not specifically approved.

IT IS SO ORDERED.

September 10, 2004        
Date                                      Karen H. Green, Chair  
Energy Facility Siting Council

**Notice of the Right to Appeal**

You have the right to appeal this order pursuant to ORS 183.484.