

ORDER APPROVING AMENDMENT No. 7
to
SITE CERTIFICATE for NORTHWEST NATURAL GAS
MIST UNDERGROUND GAS STORAGE FACILITY

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

In the Matter of the Application by)	
Northwest Natural Gas Co.)	
for Amendment No. 7 to its)	ORDER APPROVING
Site Certificate for the Mist Underground)	AMENDMENT No. 7
Natural Gas Storage Facility)	

I. Introduction and Background

On September 30, 1981, the Energy Facility Siting Council ("Council", or "EFSC") issued an Energy Facility Site Certificate to the Oregon Natural Gas Development Corporation ("ONG") for an underground natural gas storage facility at the Mist site, near Mist, Oregon, in Columbia County. ONG was a wholly owned subsidiary of Northwest Natural Gas Company ("NWN").

The Site Certificate has been amended six times. Amendment #1, issued in October 1987, extended the deadline for construction and made minor modifications to other sections of the Site Certificate. Amendment #2, issued in August 1988, added a monitoring well. Amendment #3 issued in September 1990, allowed NWN to replace some injection/withdrawal wells. In 1990 ONG assigned the site certificate to its parent company, NWN.

Amendment #4, which EFSC approved in July 1997, allowed expansion of the site boundary to include the Calvin Creek storage area, development of related and supporting surface facilities associated with new underground storage reservoirs in the Calvin Creek Storage Area, and upgrading of related and supporting surface facilities at NWN's Miller Station. This amendment included the installation of a new 5500 horsepower compressor, and increased the allowed throughput from 100 to 145 million cubic feet per day (MMcfd). To ensure that NWN would not exceed the allowed throughput, this amendment included an operating restriction on the maximum horsepower at which NWN could operate the compressors.

Amendment #5, which EFSC approved in March 1998, made the current EFSC rules at OAR 345-027-0050 through 0080 applicable to the facility. These rules govern the process for site certificate amendments. The amendment did not make the entire Division 27 applicable, but only those rules governing the amendment process.

Amendment #6, approved in March 1999, allowed development of new storage in the Calvin Creek area, on land already within the site. The amendment included the development of additional gathering lines within the site, lifted the operating restrictions to permit operation of all installed compressors at full rated capacity, and increased the allowed throughput to 190 MMcfd.

On August 29, 2000, NWN submitted its request for amendment #7. In this amendment request, NWN proposes to increase the allowed throughput from 190 to 245 MMcfd. The throughput

increase would be achieved with compression equipment already installed. NWN is not proposing to install any new equipment, other than gathering lines that were already reviewed and authorized under amendment #6.

II. Description of the Application for Amendment

A. Description of the Facility

The Mist underground storage facility provides NWN with a means of balancing relatively constant pipeline gas supplies with fluctuating market requirements. Gas is injected into storage during off-peak periods and is withdrawn when market demand exceeds available supplies from other sources. Underground reservoir storage requires suitable underground geological conditions in a specific geographic area. These conditions occur in depleted oil or gas pools. NWN identified the Mist site as one such area in the late 1970's. The site is located in rural Columbia County in parts of sections 2,3,4,10 and 11 of Township 6 North Range 5 West, Willamette Meridian.

The underground natural gas storage operation consists of a natural gas production field, retrofitted to inject gas back into the ground and withdraw it on a cyclical basis. Some gas always remains in the reservoir, to maintain operating pressure. That is known as "cushion gas". The remainder of the reservoir's capacity is used to inject and withdraw gas relatively rapidly, to meet market needs.

In addition to the naturally occurring underground gas pools, the facility includes related and supporting surface facilities. Most of these are located at NWN's Miller Station, which includes compressors, piping, control, dehydration and auxiliary systems. Other surface facilities related to the underground gas storage include gathering lines and facilities for NWN maintenance and operations staff.

The site for the Mist underground storage facility consists of Bruer/Flora and the Calvin Creek area. Bruer/Flora is located north of the Nehalem River, near Miller station. It was originally permitted in 1981. The Calvin Creek area is located two and one-half miles south of Miller Station, and was permitted in Amendment #4 in 1997. Twin 16-inch pipelines cross the Nehalem River and connect the Calvin Creek area with Miller Station.

B. Description of the Proposed Amendment

Amendment #7 would increase the allowed throughput from 190 MMcfd to 245 MMcfd. This increase would not change the site or require new equipment at Miller station.

Under amendment #6, NWN developed an area within the Calvin Creek area called the Reichhold Pool. The new pool added 45 MMcfd to the throughput at Miller station. NWN also increased gas dehydration and metering capacity. In connection with the development of the new pool, EFSC reviewed and permitted the installation of one new 12 inch line gathering line plus 6 and 8 inch feeder lines as part of amendment #6.

In its request for amendment #7, NWN proposes to construct approximately 525 feet of new 12 inch gathering lines that would serve the Reichhold pool. These gathering lines were already

studied and authorized under amendment #6. The proposed amendment does not involve construction of gathering lines other than those studied and authorized under amendment #6.

The Council does not require a site certificate amendment if a proposed change would not violate any of the conditions of the site certificate and is a change in the number or location of pipelines that would not result in the facility exceeding the permitted daily throughput or enlarge the site. OAR 345-027-0050(2)(b). This request would increase in throughput, and the permitted throughput is a condition in the site certificate. Therefore an amendment is required.

In its request for amendment #7, NWN supplied much of the required information by referencing sections of their request for amendment #6. Because the facilities and equipment that would be authorized under the throughput increase are the same facilities and equipment already authorized under amendment #6, this is an acceptable way to provide the required information.

III. Amendment Process and Procedural History

A. Amendment Process

The Council's amendment rules at OAR 345-027-0050, 0060 and 0070 apply to this request for amendment. In making a decision to grant or deny issuance of the amendment, the Council will apply state statutes, administrative rules and local government ordinances in effect on the date the Council makes its decision, and will consider the effects that the throughput increase could produce. OAR 345-027-0070(9)(d).

B. Procedural History

NWN submitted its Application on August 29, 2000. On September 1, 2000 the Oregon Office of Energy (OOE) sent written notice of the Application to all members of the EFSC general mailing list. Notice to adjacent property was not required because the proposed amendment does not change the site boundary or extend a deadline for construction. OAR 345-027-0060(1)(g).

The notice stated that the Application was available for public review at the OOE office in Salem, OR and the NWN headquarters in Portland OR.

The notice invited comments from the public and stated that the deadline for public comment was September 29, 2000. OOE received no comments.

Notice to State Agencies and Affected Local Governments

On September 1, 2000 OOE sent copies of the Application to the agencies and local governments listed in OAR 345-20-040(1). The only affected local governments in this case were Columbia County and the Mist Birkenfeld Rural Fire District. OOE received no comments.

Proposed Order and Comment Period

On October 6, 2000, OOE issued a proposed order recommending approval of the amendment. OOE issued notice to the public and state agencies, stating that the deadline to comment or to request a contested case was November 6, 2000. No comments or requests for contested case were received.

IV. Findings and Conclusions

As noted in Section II, the requested throughput increase requires no change to the compression equipment at Miller Station. That equipment is already authorized for operation at full rated capacity, under amendment #6. NWN would construct new gathering lines for the throughput increase, but those lines are already described and approved in amendment #6 as well. Therefore the impacts associated with this amendment are essentially the same as those analyzed for amendment #6. For this reason, the findings regarding compliance with EFSC standards and applicable regulations of other agencies are largely identical to those in the Order Approving Amendment #6. If regulations were amended since the approval of Amendment #6, we have noted the change in the findings below and based those findings on the regulations applicable as of August, 2000.

A. Compliance with EFSC Standards in OAR 345 Division 22

1. OAR 345-22-010 Organizational, Managerial and Technical Expertise

Under Part (1) of this standard the Council must determine whether the applicant has the organizational, managerial and technical expertise to construct and operate the facility. To conclude that the applicant has the organizational, managerial and technical expertise to construct and operate the proposed facility, the Council must determine that the applicant has

"a reasonable probability of successful construction and operation of the facility considering the experience of the applicant, the availability of technical expertise to the applicant, and, if the applicant has constructed or operated other facilities, the past performance of the applicant in constructing and operating other facilities including but not limited to the number and severity of regulatory citations, in constructing or operating a facility, type of equipment, or process similar to the proposed facility."

Part (2) of this standard does not apply because NWN did not submit an ISO certified program.

Parts (3) and (4) of the standard discuss third party permits and do not apply because no third party permits are needed.

Discussion: In its Order Approving Amendment #6, the Council found that:

"NWN is a 140 year old company whose core business is the local distribution of natural gas. NWN or its former subsidiary ONG have operated the Mist underground storage facility since 1988. The requested amendment would not allow NWN to construct a new type of facility, but would allow expansion of facilities that are already operating. The company personnel who have been managing the existing storage facility will continue to operate the expanded facility. The individuals responsible for the design and construction of the expanded facility are the same individuals responsible for the Calvin Creek project in 1997. Inspections by OOE staff indicate that NWN complied with site certificate conditions in implementing the Calvin Creek project."

Since approving amendment #6, OOE and the Oregon Public Utility Commission have monitored the construction of Phase III of the South Mist Feeder Pipeline and have identified no violations of Council standards, site certificate conditions, or OPUC regulations. The proposed

throughput increase does not involve any new type of operation, but allows the company to continue the same type of operation at a higher capacity factor.

Conclusion: NWN's experience to date in the Mist Storage Facility and the fact that the proposed throughput increase would involve activities that are identical to those currently authorized provide reasonable assurance that NWN can successfully continue to operate and retire the facility. The Council finds that the standard is met. No new conditions are required.

2. OAR 345-22-020 Structural Standard

This standard requires that:

“(1) The applicant, through appropriate site-specific study, has adequately characterized the site as to seismic zone and expected ground motion and ground failure, taking into account amplification, during the maximum credible and maximum probable seismic events; and

(2) The applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;

(3) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and

(4) The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in section (3).”

Discussion: In its application for Amendment #6, NWN provided geotechnical studies and design recommendations by their geotechnical consultant, GeoEngineers. The Council reviewed this information in consultation with Department of Geology and Mineral Industries (DOGAMI). In commenting on the Application's technical adequacy, DOGAMI wrote¹:

“DOGAMI finds the methodology used by the applicant to be acceptable and is in agreement with the conclusions regarding seismicity and geologic hazards. In conclusion, the Northwest Natural Application to Amend the Site Certificates for the Mist Underground Gas Storage Project and the Mist South Feeder Pipeline has been reviewed and found to be complete and adequate regarding geological and seismic hazards. The Application contains reports, which represent a high level of rigor by the applicant to consider these hazards.”

The Council found in its order approving amendment #6 that NWN had adequately characterized the site in terms of seismic zone and expected ground response during maximum credible seismic events, and could design and construct the facility to avoid potential dangers presented by seismic hazards affecting the site. The requested throughput increase does not involve

¹ DOGAMI letter from Dan Wermeil to Adam Bless “Comments Re: Northwest Natural Application to Amend the Site Certificates for Mist Underground Natural Gas Storage and the South Mist Feeder Pipeline” October 6, 1998

development of any new facilities, but only increases the throughput for the existing facility.

Conclusion: Based on the findings in the order approving amendment #6 and on the fact that the proposed throughput increase involves no new development, we find that the proposed amendment meets the Council's structural standard. No new conditions are required.

3. 345-22-022 Soil Protection

Under this standard the Council must find that:

***the design, construction and operation of the facility, taking into account mitigation, is not likely to result in a significant adverse impact to soils including but not limited to erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent and chemical spills.

Discussion: NWN's application for amendment #6 included a soils investigation and report as Exhibit 14. The report identified soil types that would be subject to project construction activities, and characterized the soil in terms of soil depth, permeability, water capacity, effective rooting depth, runoff, and water erosion hazard.

With regard to the gathering lines associated with development of Reichhold pool, NWN's consultant, GeoEngineers, recommended using graded water bars to control water erosion along the pipeline alignment, water breaks along the pipeline, and outlet pipes in very wet areas and areas affected by springs. After pipeline burial, NWN committed to establishing plant growth to prevent erosion. NWN committed to using native soils for backfill and to surrounding the pipeline with bedding sand as necessary.

The Council has changed this standard since the approval of amendment #6 to include consideration of chemical factors, salt deposition from cooling towers, land application of liquid effluent and chemical spills. However, the proposed amendment does not involve cooling towers, land application of liquid effluent or any new chemical equipment other than what is already authorized under the current site certificate.

As noted above, the gathering lines associated with the requested throughput increase were described and authorized under amendment #6. Therefore the NWN commitments and the recommendations of GeoEngineers remain applicable.

Conclusion: The NWN commitments identified above and GeoEngineers' construction recommendations were added as condition B(2) to Amendment #6. These conditions remain applicable. Therefore, the Council finds that the design, construction and operation activities associated with the proposed throughput increase are not likely to result in significant adverse impacts to soils. No new conditions are required.

4. 345-22-030 Land Use

Under this standard, the Council must determine whether the facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

Discussion: In approving amendment #6, the Council made the required land use determination pursuant to ORS 469.504(1)(b). The increase in throughput does not involve a change in site

boundary, development on any land not already included in the site certificate, or any activities within the site that are different from those already in place. Therefore no additional land use determination is needed.

Conclusion: The Council's findings of compliance with its Land Use standard under amendment #6 continue to apply. No new conditions are required.

5. 345-22-040 Protected Areas

This standard prohibits the siting of an energy facility in any of the protected areas listed in OAR 345-22-040(1). The council must find that the design, construction and operation of the facility located outside these areas is not likely to result in significant adverse impact to any listed protected area.

Discussion: The Mist facility and associated storage fields are not located in a protected area.

The nearest listed protected area is an Oregon State University research forest located about five miles northwest of the storage facility. All other protected areas are more than ten miles from the storage facility. In its order approving amendment #6, the Council found that:

“The Phase 3 development has minimal impacts even on its closest neighbors and is too far from the closest protected areas to affect them. We conclude that the Project is not likely to have an adverse impact on any protected areas listed in this standard.”

Conclusion: The proposed throughput increase does not change the site, and does not involve activities different from those already authorized. Therefore, the above findings regarding amendment #6 remain applicable. The Council finds that the proposed amendment meets the protected area standard. No new conditions are required.

6. 345-22-050 Financial Assurance

To issue the site certificate amendment, the Council must find that the applicant has a reasonable likelihood of obtaining a bond or comparable security, satisfactory to the Council, in an amount adequate to restore the site if the certificate holder either begins but does not complete construction of the facility or 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 to a useful, non-hazardous condition.

Discussion: This standard was not in effect when EFSC granted the original Site Certificate. In reviewing this amendment request we consider the effect the proposed amendment would have on NWN's ability to procure funds for site restoration.

NWN estimated in its request for amendment #6 that the restoration cost attributable to the Phase 3 expansion will be approximately \$100,000 in 1996 dollars. The Council concurred in this cost estimate. Based on its review of NWN's Annual Financial Reports for 1997, 1996 and 1995, the Council found, in its order approving amendment #6, reasonable assurance that NWN would be able to secure a bond or comparable security to secure restoration costs of \$100,000.

NWN has submitted its financial report for 1999. That report shows that the company's gross operating revenue and net operating revenue were higher in 1999 than in any previous year, and the company's net income of \$45,296,000 was higher than in any previous year except 1996.

This further indicates that the company can obtain a bond or comparable security to secure restoration costs of \$100,000. Because the proposed amendment does not involve the construction of new facility beyond what is already authorized, the \$100,000 estimate of site restoration cost remains appropriate.

In April 1999, EFSC amended this standard, adding a reference to the mandatory condition at OAR 345-027-0020(9), which requires the site certificate holder to establish a financial mechanism to restore the site. This rule change became effective after amendment #6 had been approved. In approving amendment #6, EFSC did not require a bond or security because of the relatively small site restoration cost and the company's demonstrated financial stability. The Council's rules at OAR 345-027-0070(9) require the Council to consider the effects that this proposed amendment could produce. The proposed throughput increase will have no effect on NWN's ability to secure funds adequate for site restoration, because no new facilities will be constructed other than those already authorized. Moreover, the new mandatory condition at OAR 345-027-0020(9) requires the establishment of a financial instrument before operations. In this case, operations have already begun. Therefore, the new mandatory condition at OAR 345-027-0020(9) does not apply.

Conclusion: The proposed throughput increase does not require any new compression equipment, and the gathering lines associated with this throughput increase were already authorized under amendment #6. Therefore the proposed amendment would not change the estimated cost of site restoration, nor would it affect NWN's ability to secure funds for site restoration. The financial report for 1999 shows that NWN remains reasonably likely to be able to obtain a bond or comparable security to secure site restoration costs of \$100,000. The Council finds that the financial assurance standard is met. No new conditions are required.

7. 345-22-060 Fish and Wildlife Habitat

To issue the site certificate amendment, the Council must find that the design, construction, operation and retirement of the facility, taking into account mitigation, is consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-030.

Discussion: OAR 635-415-030 describes categories of habitat in order of their value. The rule then establishes mitigation goals and corresponding implementation standards for each habitat category. On April 21, 2000 the Oregon Department of Fish and Wildlife (ODFW) amended its rules at OAR 635, increasing the number of habitat categories from four to six. As of the date of this proposed order, the Council had not yet amended its rules to reflect the new ODFW rules. NWN based its amendment request on the Council's rules in effect as of the date of this order. Therefore, the amendment request and this order are based on four categories.

The proposed amendment does not require any new equipment at Miller Station. Activities at Miller Station will have an insignificant effect on fish and wildlife habitat, as they will occur adjacent to existing structures within the fenced area that has already been cleared of vegetation.

The gathering lines needed for the throughput increase were described and analyzed for impact on fish and wildlife habitat under amendment #6. The lines would cross young coniferous forest (10 to 20 years old) and cleared forest areas (clear cuts). Both of these habitat types are common

in the Mist area and surrounding lands. The proposed location of the gathering lines is on land owned by Longview Fibre Company and is used for timber production. In reviewing amendment #6, ODFW considered both of these to be Habitat Category 3 (McEwen, ODFW, pers. comm. at NWN meeting, Oct. 6, 1998).

In the request for amendment #6, NWN made the following commitments regarding the gathering line construction:

- i. Water erosion along the route will be controlled using graded water bars and reestablishing vegetation.
- ii. Native soils will be used to backfill the pipeline trench.
- iii. Water breaks will be installed as necessary along the pipeline to retard ground water flow along the pipeline and reduce potential for erosion of backfill.
- iv. After construction, vegetation would be reestablished, except for large shrubs and trees, which would not be allowed within the 40-foot wide maintenance right-of-way.

Because the gathering lines for the throughput increase were discussed under amendment #6, the above commitments remain applicable. Overall, assuming successful revegetation and erosion control, the long-term effect will be to convert several acres of forested habitat to non-forested habitat. The ODFW considered this to be consistent with the goal of no net loss through "out-of-kind" mitigation (McEwen, ODFW, pers. comm. to Meehan, OE, Nov., 13, 1998).

The Council, in consultation with ODFW, added the following conditions to amendment #6:

B(6): NWN shall return the construction area to its approximately its original grade, and revegetate the disturbed areas using appropriate plant species. NWN will allow and encourage natural vegetation to return in the disturbed area, except that NWN may prevent large trees from growing in the permanent maintenance right-of-way which shall be as narrow as practicable and no greater than 40 feet wide.

B(7): During construction NWN shall use appropriate erosion control and sediment control measures, such as those in Washington County Erosion Control Plans Technical Guidance Book (February 1994), as necessary to prevent material from leaving the construction area or adversely affecting water quality in nearby and downslope streams². NWN shall also use best management practices (BMP) and follow Oregon Department of Forestry, Forest Practice Administrative Rules during construction.

These conditions remain applicable to the requested throughput increase.

In the September 2000 Secretary of State's Bulletin, OOE issued notice of a proposed rule, making the Council's Fish and Wildlife standard consistent with the ODFW rules adopted on April 21, 2000. As noted above, the new ODFW rules describe six habitat categories. However, the requested throughput increase does not involve construction or operations other than what was already authorized under amendment #6. Therefore, the pending change in the Council's standard does not affect previous findings of compliance or require findings of compliance with

2 NWN letter from Charlie Stinson to Adam Bless, December 21, 1998

the new ODFW mitigation goals.

Conclusion: The proposed throughput increase does not require new compression equipment, and the associated gathering lines were already studied and authorized under amendment #6. Conditions B(6) and B(7) to amendment #6 remain applicable to the gathering line construction. Therefore, the Council finds that the proposed throughput increase meets the Council's Fish and Wildlife Habitat Standard. No new conditions are required.

8. 345-22-070 Threatened and Endangered Species

To issue the site certificate amendment, the Council, after consultation with appropriate state agencies, must find that:

- (1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction, operation and retirement of the proposed facility, taking into account mitigation:
 - (a) Is consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or
 - (b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, is not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and
- (2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction, operation and retirement of the proposed facility, taking into account mitigation, is not likely to cause a significant reduction in the likelihood of survival or recovery of the species.

Discussion: In its order approving amendment #6, the Council found that:

- No plant species listed as endangered or threatened under ORS 564.105(2) occur in the area of the proposed gathering line or Miller Station.
- No wildlife species listed as endangered or threatened under ORS 496.172(3) regularly occur in, or significantly use, the area of the proposed gathering line or Miller Station.
- No conservation program adopted under ORS 496.172(3) or ORS 564.105(3) applies.

The Council made those findings in its order approving amendment #6 April 1999. There have been no new listings since then that would affect the facilities in use for the proposed throughput increase.

Conclusion: The Council finds that the proposed throughput increase complies with its Threatened and Endangered Species Standard. No new conditions are required.

9. 345-22-080 Scenic and Aesthetic Values

To issue the site certificate amendment, the Council must find that the design, construction, operation and retirement of the facility, taking into account mitigation, is not likely to result in significant adverse impact to scenic and aesthetic values identified as significant or important in applicable federal land management plans or in the local land use plan for the site or its vicinity.

Discussion: In its order approving amendment #6, the Council found that :

“There is no federally owned land in the vicinity of the gas storage facility. The applicable local land use plan is Columbia County’s Comprehensive Plan. It contains an inventory of five “County Scenic Resources.” The gas storage facility is not visible from (or within the viewshed of) any area identified by Columbia County as a scenic resource.

The plan also identifies portions of Highway 47 as a state-designated scenic highway. Miller Station is visible from two points along Highway 47. The modifications proposed at Miller Station include adding a second natural-gas dehydration tower. It will be about 20 feet high and four or five feet in diameter. It will be built next to a similar existing tower. The existing tower is not visible from any significant distance due to the 30- to 40-foot fir trees that surround the station. The new tower will not result in a significant visual change in the appearance or visibility of the station. Therefore, it will not have a significant adverse impact on important scenic values.”

Since the proposed throughput increase does not involve any new structures, the above findings continue to apply.

Conclusion: The Council finds the proposed throughput increase is not likely to result in significant adverse impact to scenic and aesthetic values protected by the rule. No new conditions are required.

10. 345-22-090 Historic, Cultural and Archaeological Resources

To issue the site certificate amendment, the Council must find that:

“the construction, operation and retirement of the facility, taking into account mitigation, is not likely to result in significant adverse impacts to:

- (1) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;
- (2) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and
- (3) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).”

Discussion: In its order approving amendment #6, the Council found that:

“No previously recorded archeological sites have been identified in the gas storage facility expansion project area. An archeologist surveyed the project area on June 26, 1998. The archeological survey of the gathering lines and well sites did not identify any cultural resources.”

The proposed throughput increase involves no new construction other than what was studied and authorized under amendment #6. A monitoring plan for archeological sites and artifacts was approved for amendment #6 and remains applicable to the proposed throughput increase.

Conclusion: The Council finds that the proposed throughput increase is not likely to result in significant impacts to historic, cultural or archeological resources or archeological objects or sites protected by this rule. The monitoring plan approved for amendment #6 remains applicable. No new conditions are required.

11. 345-22-100 Recreation

To issue site certificate amendment, the Council must find that:

“ the design, construction and operation of a facility, taking into account mitigation, is not likely to result in a significant adverse impact to important recreational opportunities in the impact area. Factors that will be considered in judging the importance of a recreational opportunity include:

- (1) Any special designation or management of the location;
- (2) The degree of demand;
- (3) Outstanding or unusual qualities;
- (4) Availability or rareness; and
- (5) Irreplaceability or irretrievability of the opportunity.”

Discussion: In its application for amendment #6, NWN evaluated recreation impacts within a five-mile radius of the proposed site of the gas storage facility expansion. Recreation opportunities included sites and facilities identified by Columbia County and fishing and hunting throughout the area. The Council found that:

***the gas storage facility expansion is not likely to result in a significant adverse impact to important recreation opportunities.

The proposed throughput increase does not involve construction of facilities other those authorized in amendment #6. Therefore, the previous findings continue to apply.

Conclusion: The Council finds that the proposed throughput increase will not result in a significant adverse impact to important recreational opportunities in the area. No new conditions are required.

12. 345-22-110 Socio-Economic Impacts

To issue the site certificate amendment, the Council must find that:

**the construction and operation of the facility, taking into account mitigation, is not likely to result in significant adverse impact to the ability of communities within the study area to provide the following governmental services: sewers and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

Discussion: In NWN’s application for amendment #6, the socio-economic study area for the gas storage facility expansion was 30 miles from the site boundary. Potential providers of governmental services in the study area included Columbia and Clatsop Counties and incorporated cities and towns, including Vernonia and Clatskanie. The Council found that:

*** the Phase 3 storage expansion is not likely to result in a significant adverse impact to the ability of communities within 30 miles of the site to provide any of the government services listed in the rule.

Conclusion: The proposed throughput increase does not change the site or involve construction

of any new facilities other than those authorized in amendment #6. Therefore, the previous findings continue to apply. The Council finds that the proposed throughput increase meets its socio-economic standard. No new conditions are required.

13. 345-22-120 Waste Minimization

This standard provides that, to the extent reasonably practicable:

“(1) the applicant’s solid wastewater plans are likely to minimize generation of solid waste and wastewater in the construction, operation, and retirement of the facility, and when solid waste or wastewater is generated, recycle and reuse such wastes.

(2) the applicant’s plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility must have minimal adverse impact on surrounding and adjacent areas.”

Discussion: The proposed throughput increase does not involve construction of any new facilities other than those authorized under amendment #6. In its application for amendment #6, NWN described its waste minimization program for the construction activities associated with developing the Reichhold pool. The Council added the following conditions to amendment #6:

B(8): NWN shall transport construction waste materials to an appropriate recycling facility or to an approved sanitary landfill for nonrecyclable goods. NWN shall collect scrap steel and welding rod for transportation to a recycling facility. Silt fence and straw bales shall be transported to an approved landfill.

B(9): Nonhazardous wastes associated with the Project such as crankcase oil, triethylene glycol and oil/water separator oils shall be collected, transported and recycled by a vendor as bunker fuel. Oily rags and oil filters shall be incinerated off site by a permitted disposal facility. Granular activated carbon will be collected and sent to a permitted facility for regeneration. NWN may use alternate methods of disposal if approved by the Office of Energy.

Conclusion: The proposed throughput increase will not generate liquid or solid waste other than what is already authorized. The Council finds that the proposed amendment meets the Council’s waste minimization standard. Conditions B(8) and B(9) will continue to apply to any NWN construction activities. No new conditions are required.

14. 345-22-130 Retirement

To issue a Site Certificate, the Council must find that the site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following facility retirement.

Discussion: NWN does not foresee retirement of the underground storage facility. However, in its order approving amendment #6, the Council reviewed NWN’s discussion of the steps needed to retire the pipelines associated with the storage facility, and concurred that the method proposed by NWN would adequately restore the site to a useful, non-hazardous condition and would cause less disruption to the environment than removing the lines.

The Council also found that the site of Miller Station can be restored to a useful and safe

condition. The proposed throughput increase does not affect the steps associated with retiring Miller Station.

Most of the costs of retirement are associated with Miller Station. The Council that these costs were not significantly changed by amendment #6. These costs would not be affected by the proposed throughput increase.

Conclusion: The throughput increase does not affect the steps needed to retire the facility, or the costs. The Council finds that the proposed amendment meets its retirement standard. No new conditions are required.

B. EFSC Standards in OAR 345 Division 24

1. OAR 345-24-030 Public Health and Safety Standards for Surface Facilities Related to Underground Gas Storage Reservoirs

The Council amended this standard in February 2000. The standard has four parts, as follows:

- (1) The proposed facility is at distances in accordance with the schedule below from any existing permanent habitable dwelling:
 - (a) Major facilities, such as compressor stations, stripping plants and the main line dehydration stations – 700 feet;
 - (b) Minor facilities, such as offices, warehouses, equipment shops and odorant storage and injection equipment – 50 feet;
 - (c) Compressors rated less than 1000 horsepower – 350 feet;
 - (d) Roads and road maintenance equipment housing – 50 feet;
- (2) An applicant can construct and maintain the facility in accordance with the applicable requirements of the U.S. Department of Transportation as set forth in 49 CFR 192 and OAR 860-24-020 in effect as of the date of this rule.
- (3) The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure public health and safety.
- (4) The applicant can design, construct and operate the facility so as not to produce or contribute to seismic hazards that could endanger the public health and safety or result in damage to property.

All facilities listed in part (1) are located at sufficient distances from the nearest permanent habitable dwelling. The proposed throughput increase does not involve installation of any new facilities. The existing facility continues to meet this part of the rule.

Part (2) is met because NWN must comply with Federal regulations in 49 CFR 192. The Oregon PUC administers and inspects for compliance with these rules under a delegation from the Federal government. The most recent PUC inspection report, dated May 1996, indicated that the Mist facility was in compliance. The proposed throughput increase will not change the design of facilities, their maintenance, or their operation, except to allow operation at a higher capacity factor. This will not affect NWN's ability to operate in compliance with regulations of the U.S.

Department of Transportation or the Oregon Public Utilities Commission.

Part (3) is met because the proposed throughput increase will not involve installation or operation of any new facilities or equipment, and because the safety monitoring and emergency systems that the Council reviewed in approving amendment #6 will remain in effect. As described in the order approving amendment #6, an Emergency Shutdown system is in place that can be either manually or automatically activated. It stops all active plant process, closes all plant inlet and outlet valves, shuts off the engine fuel and start gas systems and, upon closure of necessary valves, vents to atmosphere all process and fuel gas within the plant. As methane is lighter than air, the safe location is to vent vertically. These systems are maintained on a regular basis and tested at least annually to assure proper response. Systems are in place to monitor compressor pressure and control building atmospheres for the presence of flammable vapors as well as systems that detect the presence of a fire. These instruments will trigger an alarm or plant shutdown when certain preset levels are reached. The plant has a staff of seven operators and maintenance personnel working rotating shifts. A communication link is maintained between the plant and the NWN Operations control room in Portland.

Part (4) is met because the facility, as approved in amendments #4 and #6, complies with the EFSC Structural Standard. The proposed throughput increase does not involve construction of new compression equipment or gathering lines other than those authorized under amendment #6.

Therefore the Council finds that the proposed throughput increase complies with the public health and safety standards for surface facilities related to underground storage facilities. No new conditions are required.

2. Standards for Facilities that Emit Carbon Dioxide (OAR 345-024-0500 Et. Seq.)

At the time NWN submitted its application for amendment #6, the Council had not yet adopted carbon dioxide standards for non-generating facilities. The proposed throughput increase does not involve the installation of new compression equipment. Under amendment #6 the existing compressors at Miller Station are already authorized for operation at full rated capacity. Therefore findings of compliance with the Council's carbon dioxide standards for this requested amendment are not required.

C. Requirements of Other Agencies

The proposed throughput increase requires no permits other than the site certificate amendment.

The gathering lines for the proposed throughput increase were studied and approved under amendment #6. As discussed in the order approving amendment #6:

The locations of the proposed gathering lines were examined for the presence of wetlands on June 25 and 26, 1998. Two wetlands were found in the vicinity of the proposed gathering lines. The lines were routed to avoid each wetland. Therefore no DSL permit was required. Hydrostatic testing was completed in October 1998. Therefore no further permits are needed.

Since no new gathering lines are proposed other than those authorized under amendment #6, these findings remain applicable.

Operation of the compressors will not require a change to NWN's Air Contaminant Discharge Permit, because the existing permit is already based on the compressors' rated capacity. In any case, the federal government has delegated the authority for that permit to the Department of Environmental Quality (DEQ).

The Council is responsible for implementing the DEQ noise regulations at OAR 340 Division 35. The only equipment associated with the Mist Storage Facility that produces significant noise is the compression equipment at Miller Station. The Council found in approving amendment #4 that this equipment met the DEQ noise standard. NWN provided the results of post-construction noise testing in its application for amendment #6, demonstrating compliance with the noise standard. No new equipment is proposed. The proposed throughput increase does not affect the facility's compliance with the noise standard because the noise tests described above were conducted with compressors running at full capacity.

D. Conditions from OAR 345 Division 27

In approving amendment #6, EFSC added applicable conditions to the site certificate as listed in OAR 345-027-0020, 0023 and 0028. Conditions listed under OAR 345-027-0020 were imposed either directly under that rule or in support of Council findings of compliance with its standards in OAR 345 Division 22. Those conditions remain applicable and need not be duplicated here.

In April 1999, subsequent to its approval of amendment #6, EFSC adopted new conditions at OAR 345-027-0020(8) and (9), requiring that:

(8) Before beginning construction of the facility, the 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 the site certificate. The Council shall specify an amount adequate to restore the site to a useful, non-hazardous condition if the certificate holder either begins but does not complete construction of the facility or permanently closes the facility before establishing the financial mechanism or instrument described in section (9). The certificate holder shall maintain the bond or comparable security in effect until the certificate holder has established that financial mechanism or instrument; and

(9) Before beginning operation of the facility, the certificate holder shall establish a financial mechanism or instrument, satisfactory to the Council, assuring the availability of adequate funds throughout the life of the facility to retire the facility and restore the site to a useful, non-hazardous condition as described in OAR 345-022-0130. The certificate holder shall retire the facility according to an approved final retirement plan, as described in OAR 345-027-0110.

In making the decision to grant or deny this requested throughput increase, the Council is required to consider the effects that this amendment could produce. OAR 345-027-0070(9)(d). The Council did not require a bond, security or new financial mechanism in approving amendment #6. The amendment now proposed does not require construction of new facilities other than those already authorized under amendment #6. Moreover, construction and operation of the facility have already begun as authorized under amendment #6, and the proposed amendment #7 only increases the allowed throughput. Therefore, the Council finds that the new

conditions at OAR 345-027-0020(8) and (9) are not applicable.

V. Issues Raised in Public Comment

The Council received no comments or requests for contested case from the public or from affected local governments regarding the proposed throughput increase.

VI. Conclusions about the Request for Throughput Increase

The Council finds that the request for throughput increase from 190 MMcfd to 245 MMcfd is consistent with current Council rules, with other applicable state statutes and rules and with statewide planning goals and would not cause a significant adverse impact to public health and safety. In preparing this order, the Council has considered state statutes, administrative rules and local government ordinances in effect at this time, and whether the facility complies with all Council standards in effect at this time.

Based on the above findings, reasoning and conclusions, the Council amends the Site Certificate to permit operation at 245 MMcfd as described in this order, which shall be incorporated into the Site Certificate. One site certificate condition shall be amended as follows:

Site Specific Conditions Under 345-027-0023

(4) ~~The Site Certificate shall specify the site boundary and total permitted daily throughput of the facility.~~ The site boundary is as specified in Exhibit 2 to the Application for Amendment #7; the total permitted daily throughput of the facility is 245 MMcfd.

The conditions listed in Amendment #6, including conditions from OAR 345 Division 27, remain in effect and need not be duplicated here. No other new conditions are required.

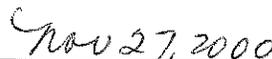
FINAL ORDER

Based on the above findings of fact, discussions, and conclusions of law, the Energy Facility Siting Council approves NWN's Request for Amendment #7. The Council Chair shall execute the site certificate amendment in the form of "Amendment #7 to the Site Certificate for the Mist Underground Natural Gas Storage Facility".

Issued November 17, 2000.



Karen H. Green



date

Chair, Energy Facility Siting Council

Notice of the Right to Appeal

You have the right to appeal this order to the Oregon Supreme Court pursuant to ORS 469.405. To appeal you must file a petition for judicial review with the Supreme Court

within 60 days from the day this order was served on you. If this order was personally delivered to you, the date of service is the date you received this order. If this order was mailed to you, the date of service is the date it was mailed, not the day you received it. If you do not file a petition for judicial review within the 60-day time period, you lose your right to appeal.