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**SECOND AMENDED
SITE CERTIFICATE**

FOR THE

**NORTHWEST NATURAL
SOUTH MIST PIPELINE EXTENSION**

ISSUED BY

OREGON ENERGY FACILITY SITING COUNCIL
625 MARION STREET NE
SALEM OR 97301-3737

503.378.4040
503.373.7806 FAX

DECEMBER 5 2003

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**SECOND AMENDED SITE CERTIFICATE FOR
SOUTH MIST PIPELINE EXTENSION
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SITE CERTIFICATE
FOR THE
NORTHWEST NATURAL
SOUTH MIST PIPELINE EXTENSION**

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I. INTRODUCTION

40 This Site Certificate for the South Mist Pipeline Extension (“SMPE”) is issued and executed in
41 the manner provided by ORS chapter 469, by and between the State of Oregon (“State”), acting
by and through its Energy Facility Siting Council (“Council”), and Northwest Natural Gas
Company (“NWN” or “certificate holder”).

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of
this Site Certificate are set forth in: (1) the Council's Final Order in the Matter of the Application
for a Site Certificate for the South Mist Pipeline Extension, which the Council granted on March
13, 2003, and which by this reference is incorporated herein; (2) the Council’s Final Order
Approving Amendment #1, which the Council issued on August 28, 2003, and the Council’s
Final Order Approving Amendment #2, issued on December 5, 2003.

In interpreting this Site Certificate, any ambiguity shall be clarified by reference to, and in the
following priority: (1) this Site certificate; (2) the Order Approving Amendment 1; (3) the Order
Approving Amendment 2; and (4) the record of the proceedings that led to the Final Order in the
Matter of the Application for Site Certificate.

The terms used in this Site Certificate shall have the same meaning set forth in ORS 469.300 and
Oregon Administrative Rules (OAR) 345-001-0010, except where otherwise stated or where the
context clearly indicates otherwise.¹ The term “corridor” means the 200-foot wide corridor that
the Council approved as the site for the SMPE, plus workspaces and access routes approved by
the Council under Amendment 1.

40
41

II. SITE CERTIFICATION

1. To the extent authorized by State law and subject to the conditions set forth herein, the
State approves and authorizes the certificate holder to construct, operate and retire a 24-
inch diameter natural gas transmission pipeline, approximately 62 miles in length, within
a corridor described in Section C of this Site Certificate, between the Bacona Station in
Washington County and the Molalla Gate Station near Molalla Oregon. ORS 469.401(1).
2. This Site Certificate shall be effective (1) until it is terminated pursuant to OAR
345-027-0110 or the rules in effect on the date that termination is sought, or (2) until the

¹ Effective January 1, 2004, the Oregon Office of Energy will become the Oregon Department of Energy. The terms
“Office” or “OOE” are retained at this time in the Site Certificate.

1 Site Certificate is revoked pursuant to ORS 469.440 and OAR 345-029-0100 or the
2 statutes and rules in effect on the date that revocation is ordered. ORS 469.401(1).
3

4 3. This Site Certificate does not address, and is not binding with respect to, matters that
5 were not addressed in the Council's Final Order of March 13, 2003 or the Orders
6 Approving Amendments 1 and 2. These matters include, but are not limited to: building
7 code compliance; wage, hour and other labor regulations; local government fees and
8 charges; other design or operational issues that do not relate to siting the SMPE; and
9 permits issued under statutes and rules for which the decision on compliance has been
10 delegated by the federal government to a state agency other than the Council. ORS
11 469.401(4) and 469.503(3).
12

13 4. Both the State and the certificate holder shall abide by local ordinances and state law and
14 the rules of the Council in effect on the date this Site Certificate is executed. In addition,
15 upon a clear showing of a significant threat to the public health, safety or the environment
16 that requires application of later-adopted laws or rules, the Council may require
17 compliance with such later-adopted laws or rules. ORS 469.401(2).
18

19 5. For a permit, license or other approval addressed in and governed by this Site Certificate,
20 the certificate holder shall comply with applicable state and federal laws adopted in the
21 future to the extent that such compliance is required under the respective state agency
22 statutes and rules. ORS 469.401(2).
23

24 6. Subject to the conditions herein, this Site Certificate binds the State and all counties,
25 cities and political subdivisions in this state as to the approval of the site and the
26 construction, operation and retirement of the SMPE as to matters that are addressed in
27 and governed by this Site Certificate. ORS 469.401(3).
28

29 7. Each affected state agency, county, city and political subdivision in the State with
30 authority to issue a permit, license or other approval addressed in or governed by this Site
31 Certificate shall, upon submission of the proper application and payment of the proper
32 fees, but without hearings or other proceedings, issue such permit, license or other
33 approval subject only to conditions set forth in this Site Certificate. ORS 469.401(3).
34

35 8. After issuance of this Site Certificate, each state agency or local government agency that
36 issues a permit, license or other approval for the SMPE shall continue to exercise
37 enforcement authority over such permit, license or other approval. ORS 469.401(3).
38

39 9. After issuance of this Site Certificate, the Council shall have continuing authority over
40 the site and may inspect, or direct the Office to inspect, or request another state agency or
41 local government to inspect, the site at any time in order to assure that the SMPE is
42 constructed and operated consistently with the terms and conditions of this Site
43 Certificate. ORS 469.430.
44

1 **III. FACILITY DESCRIPTION**

2
3 **A. FACILITY**

4 The SMPE is a 24-inch diameter natural gas pipeline, approximately 62 miles long. Its northern
5 terminus is the Bacona Blowdown Station, which is located in forest land north of Dairy Creek
6 just south of the Washington and Columbia County border. It extends generally south and east
7 through rural lands in Washington, Marion and Clackamas Counties. Its most southerly point is
8 the Williams Pipeline Gate Station located northwest of Molalla.

9
10 NWN proposed the pipeline to effectively utilize gas storage capacity at the Mist Underground
11 Natural Gas storage facility. An underground natural gas storage facility provides NWN with a
12 means of balancing relatively constant pipeline gas supplies with widely fluctuating demand.
13 Gas usage is generally lowest during summer months and peaks during the winter. The
14 underground natural gas storage operation consists of a natural gas production field, retrofitted to
15 inject gas back into the ground and withdraw it on a cyclical basis. Gas is injected into storage
16 during off-peak periods and is withdrawn during periods of peak demand.

17
18 Underground reservoir storage requires suitable underground geological conditions in a specific
19 geographic area, and can only be sited where those conditions exist naturally. Mist is one such
20 area because it was, at one time, a producing gas field. The gas stored at Mist is purchased from
21 the interstate natural gas transmission system. NWN proposes this pipeline in order to connect
22 the Mist storage facility with the interstate system.

23
24 A second purpose of this pipeline is to accommodate the growth in demand for natural gas in the
25 western Portland suburbs. The NWN distribution system currently includes major feeder lines
26 serving Hillsboro, Sherwood and Newberg. NWN proposed the SMPE in order to connect with
27 these feeder lines and increase the available supply to these suburbs during peak periods.

28
29 NWN already operates one 16-inch pipeline that connects the Mist storage facility with the
30 distribution system serving the Portland area. NWN operates this pipeline under a Site
31 Certificate issued by the Council in 1989. The 16-inch pipeline is called the South Mist Feeder.
32 It travels south from Mist, crosses the Tualatin Mountains and enters Washington County in
33 forested land north of the Dairy Creek Valley, travels south through Dairy Creek Valley and east
34 along Mountaindale and West Union Roads until it reaches West Union.

35
36 In 1999 the Council amended the South Mist Feeder site certificate, authorizing a 24-inch
37 pipeline parallel to the 16-inch line and located within the same corridor. NWN constructed this
38 24-inch pipeline in 1999. It starts at the Mist storage facility and runs for approximately 30
39 miles, tying in to the 16-inch line at a point called the Bacona Blowdown Station, located in
40 forest land just south of the Washington and Columbia County border. NWN proposes to begin
41 the SMPE at the Bacona Blowdown Station and follow the existing corridor for the 16-inch line
42 until just north of Mountaindale Road. From that point, the SMPE site is all new corridor.

43
44 In most locations, the proposed pipeline will be buried at a depth of 5 feet on average. This
45 depth may vary based on local requirements. The pipeline must be designed and constructed in

1 accordance with federal safety regulations of the US Department of Transportation at 49 CFR
2 192. The maximum allowable operating pressure (MAOP) as established by the hydrostatic
3 pressure test, will be 720 psig. The Oregon Public Utility Commission administers the 49 CFR
4 192 regulations under a delegation from the federal government. The pipeline would be
5 underground its entire length, with the exception of certain above ground valves and inspection
6 points that are required by the federal code.
7

8 Although NWN requested a 200-foot wide corridor, the approved site is limited by condition.
9 During the construction period, there will be a construction easement, generally 80 feet wide (the
10 "Construction Easement"). The full width of the Construction Easement will be used only
11 during construction. It will be restored after construction and returned to its previous use. NWN
12 also will require a permanent easement directly over the pipeline for maintenance and safety (the
13 "Maintenance Easement"). The Maintenance Easement will be restored to its pre-construction
14 condition and use except that large trees or other vegetation with potentially damaging root
15 structures will not be allowed to grow in close proximity to the pipeline. The term "easement" is
16 given a specific meaning in this site certificate and is defined for the purposes of this site
17 certificate in General Land Use Conditions.
18

19 In general, the Maintenance Easement will be 40 feet wide. Where the pipeline is along public
20 right-of-way, the Council adopts conditions limiting the width of the easement on private land in
21 the EFU zone. In areas where the new pipeline will be placed next to the 16-inch pipeline, the
22 easement will remain 40 feet. In certain locations NWN may need to deviate from the nominal
23 widths of these easements. The site certificate includes conditions under the Council's Land Use
24 Standard OAR 345-022-0030 and Mandatory Conditions under OAR 345-027-0020 that address
25 deviations from the nominal width of the Maintenance and Construction easements.
26

27 NWN included 44 aerial photographic panels with the ASC, submitted as Appendix K-2 (and
28 supplemented in July 2001). These panels are the clearest representation of the proposed
29 corridor location, and we refer to them throughout this site certificate. Among other things, the
30 panels show the expected location of temporary lay-down areas that will be required in
31 connection with the construction of the proposed facility. Portions of these proposed lay-down
32 areas are outside of the 200-foot pipeline corridor. On June 5, 2003 NWN requested approval
33 for additional laydown areas and temporary access roads outside the 200-foot corridor. The
34 Council approved of these additional laydown areas and access roads in its August 28, 2003
35 Order Approving Amendment #1. The approval granted by EFSC includes approval for the
36 construction-related use of the temporary lay-down areas and access roads. To ensure that this
37 use complies with applicable siting standards, this site certificate contains conditions relating to
38 the temporary use of these areas. NWN has also indicated that certain other areas will be used
39 for pipeline construction staging in connection with construction of the proposed facility. This
40 site certificate authorizes only the use of those areas shown on the 44 aerial photographs in
41 Appendix K-2 as supplemented, and those described in Exhibit 3 and shown on Exhibits 4 and 5
42 of NWN's June 5, 2003 request for amendment #1. In the event that the use of other areas is
43 necessary in connection with the construction of the proposed facility, NWN will (to the extent
44 such uses are within the Council's jurisdiction) address the use of those areas through additional
45 amendment to the site certificate. [amendment 1]

1
2 The SMPE does not include any “related or supporting facilities”, as that term is defined at OAR
3 345-001-0010.
4

5 **B. LOCATION OF THE FACILITY**
6

7 The following route description is for the approved corridor and the alternate corridor segments.
8 The corridor and corridor segments have also been overlain onto 44 aerial photos, which provide
9 more accurate visual representations of them. Figure K-2 of the ASC shows this in reduced size
10 and is the clearest depiction of the pipeline location in the Application. For purposes of this
11 description, road names are used to identify the location of the Preferred Corridor and Alternate
12 Corridor Segments, but the location in or along the right of way for those roads is governed
13 solely by conditions of the site certificate. The following description does not attempt to deal
14 with the specific location of the pipeline within the corridor.
15

16 The approved corridor for the SMPE has its northern terminus in Washington County at the
17 Bacona Blowdown Station, which is the terminus of the 24-inch loop that NWN added to the
18 South Mist Feeder pipeline in 1999 under amendment 2 to its existing site certificate. It
19 continues through the Dairy Creek Valley, paralleling in close proximity to the existing 16-inch
20 South Mist Feeder. The Preferred Corridor deviates from the existing easement for the 16-inch
21 pipeline just north of Mountaindale Road. At this point, the Council authorizes Preferred and
22 Alternate corridor segments. Both options include a bore under Dairy Creek near its intersection
23 with Mountaindale road. From this intersection, the route proceeds south along Mountaindale
24 Road and Dersham Road to the north side of State Highway 26, where it turns to the east and
25 runs parallel to the highway right-of-way. The route continues east approximately one-half mile
26 to the highway overpass and then turns south, crossing under the highway overpass and the
27 railroad right-of-way.
28

29 At this point, a Preferred Corridor and an Alternate Corridor Segment have been identified. The
30 Preferred Corridor aligns with Milne Road and continues south to Zion Church Road, turns east,
31 and then proceeds to Davis Road. The Alternate Corridor Segment, known as the Milne/Gordon
32 Road Alternate, proceeds east along the south side of the Highway 26 right-of-way, turns south
33 along Gordon Road, proceeds south to Zion Church Road, and then turns west and proceeds to
34 Davis Road. The Preferred Corridor and the Milne/Gordon Road Alternate intersect at Davis
35 Road and Zion Church Road where both turn south along Davis Road.
36

37 The Preferred Corridor then proceeds south to Wren Road, where it turns east and then south
38 along Leisy Road. It continues south to the intersection with Hornecker Road and Padgett Road,
39 where it continues south along the Padgett Road public right-of-way for approximately one-half
40 mile and then traverses private land to the west. At this point, NWN again identified Preferred
41 and Alternate options. Both options generally parallel Dairy Creek and lead to an underground
42 bore south across State Highway 8. The corridor continues cross-country in a general
43 southeasterly direction and then turns southerly just west of Highway 219, which it parallels until
44 the first crossing of the Tualatin River.
45

1 The Preferred Corridor intersects Highway 219 just south of the Tualatin River and continues to
2 just south of Burkhalter Road, where it traverses cross-country in a generally easterly direction
3 along property boundaries and then intersects Burkhalter Road near Rood Bridge Road.
4

5 The corridor continues east past Rood Bridge Road and traverses cross-country in a southeasterly
6 direction to the second crossing of the Tualatin River. Just south of the Tualatin River, the
7 corridor intersects River Road and continues southerly and southeasterly along River Road
8 where it transitions to Highway 210. In the vicinity of Tufel Hill Road, the corridor traverses
9 cross-country until it intersects Pleasant Valley Road and then proceeds southbound. Just south
10 of the Tualatin River National Wildlife Refuge, the corridor traverses cross-country to the south,
11 crossing the Tualatin River and continuing south to Scholls-Sherwood Road.
12

13 At this point, the Council has approved a Preferred corridor and one Alternate corridor segment.
14 The Preferred corridor aligns eastbound along Scholls-Sherwood Road and transitions onto
15 Elwert Road southbound. It diverges from Elwert Road at Chicken Creek, where the corridor
16 traverses southwest cross-country to Krueger Road. The alternate to the Preferred Corridor, the
17 Edy/Elwert Road Alternate, continues further south along Elwert Road, and across Edy Road, for
18 approximately one-half mile and then proceeds cross-country to the west, turning south and east
19 along property lines to Haide Road, until it intersects the Preferred Corridor. (A second alternate
20 Corridor Segment, the Eastview Road Alternate, was proposed in the application but shall not be
21 used, in accordance with a condition to the Site Certificate.)
22

23 At this point, the Preferred Corridor turns east and crosses Highway 99W and continues east
24 along Brookman Road. The corridor follows Brookman Road to a point near the
25 Washington/Clackamas County line, traverses cross-country to the south and intersects with
26 Ladd Hill Road. It continues south and east following Ladd Hill, Pleasant Hill, McConnell, and
27 Tooze Roads, and then turns south onto Baker Road.
28

29 At this point, Council approved a Preferred Corridor, which continues along Baker Road, and an
30 Alternate Corridor Segment, the Baker Road Alternate, which would provide a more direct
31 lineup for the directional drilling under the Willamette River. The Preferred Corridor and the
32 Baker Road Alternate join at the proposed laydown area, where the Preferred Corridor continues
33 south cross-country, passing under the Willamette River and emerging in close proximity to
34 Butteville Road approximately one-half mile west of Graham Road. The Preferred Corridor
35 continues cross-country to the south, crosses the Marion/Clackamas County line, continues to
36 Arndt Road, and turns east.
37

38 At this point the Preferred Corridor proceeds eastbound, crosses under I-5, transitions from
39 Marion to Clackamas County, and continues east to the Hubbard cutoff, where it turns south.
40 The corridor continues south a short distance and traverses to the east on private property to
41 Airport Road. Before the Preferred Corridor's intersecting with Airport Road, NW Natural has
42 identified another Alternate Corridor Segment, the Aurora Airport Alternate, through the Aurora
43 Airport. The Aurora Airport Alternate and the Preferred Corridor join at the intersection with
44 Airport Road.
45

1 The Preferred Corridor then turns south onto Airport Road, proceeds a short distance to the
2 south, turns east and traverses private property, crosses under the Pudding River, and emerges in
3 the vicinity of Anderson Road. It follows Anderson Road for a short distance, turns south about
4 600 feet before Barlow Road, and crosses Highway 99E. The corridor intersects Barlow Road,
5 turns south, and follows Barlow road south until a point just before Zimmerman Road.
6

7 At this point, the Preferred Corridor runs parallel to roads, but follows property lines. It
8 traverses easterly cross-country just north of Zimmerman Road and proceeds east to Oglesby
9 Road, where it then turns south. The corridor travels east again on private land just north of
10 Heinz Road. It continues east past Dryland Road, and turns south along property lines to the
11 Molalla Gate Station. A site certificate condition states that NWN shall use this preferred
12 corridor. An alternate corridor, along Heinz, Zimmerman and Dryland Roads, was proposed but
13 will not be used.
14

15 **IV. Site Certificate Conditions**

16 Based upon the review of the record, excluding any evidence not properly or timely made a part
17 of the record and including the Application for Site Certificate, the Proposed Order, the Hearing
18 Officer's Recommended Order and findings contained therein, parties' exceptions and responses
19 to exceptions to the Recommended Order and oral argument of the parties, the Council on March
20 13, 2003 adopted the OOE Proposed Order, attached to the Council's final order as Attachment
21 C, as specifically modified by the Council's final order, and approved a site certificate for the
22 SMPE, subject to conditions of approval. The Council modifies those conditions based on its
23 review of NWN's requests for Amendments 1 and 2. As amended, the conditions of the site
24 certificate are as follows :
25

26 **A. MANDATORY CONDITIONS FROM OAR CHAPTER 345, DIVISION 27**

- 27 1) NWN shall submit to the Office two copies of a legal description of the site to be appended
28 to the Site Certificate prior to beginning operation. For the purposes of this site certificate,
29 the term "legal description" means a legal description of the permanent maintenance
30 easements recorded by NWN, and an accurate map or set of maps that clearly and
31 specifically show the boundaries of the maintenance easements. The map must be in no
32 smaller scale than 1 inch to 500 feet. In the event of a conflict between the recorded
33 easements and the map, the recorded easements will control.
34
- 35 2) The pipeline shall be designed, constructed, operated and retired substantially as described in
36 the Final Order Approving Site Certificate; in compliance with the requirements of ORS
37 Chapter 469, applicable Council rules, and applicable state and local laws, rules and
38 ordinances in effect at the time the Site Certificate is issued; and in compliance with all
39 applicable permit requirements of other state agencies.
40
- 41 3) Construction shall commence not later than 18 months after issuance of the site certificate or
42 the final resolution of appeals and shall be completed not later than three years following the
43 commencement of construction. In no event shall construction commence after July 1, 2005.
44

- 1 4) No construction, including clearing of a right of way, except for the initial survey, may
2 commence on any part of the facility until the certificate holder has adequate control, or has
3 the statutory authority to gain control, of the lands on which clearing or construction will
4 occur.
5
- 6 5) NWN shall prevent any condition over which NWN has control from developing on the site
7 that would preclude restoration of the site to a useful condition.
8
- 9 6) NWN shall restore vegetation to the extent practicable and shall landscape portions of the
10 area disturbed by construction in a manner compatible with its surroundings and/or proposed
11 future use. Upon completion of construction, NWN shall dispose of all temporary structures
12 not required for future use and all refuse and flammable materials or combustible material
13 resulting from the clearing of land or from construction of the facility, as well as timber and
14 brush that is not used for habitat mitigation in accordance with conditions related to the
15 Council's Fish and Wildlife Habitat standard.
16
- 17 7) The construction easement shall be limited to 80 feet, except where a narrower or wider
18 construction corridor is required by conditions related to individual Council standards. NWN
19 may deviate from this maximum construction easement width if such deviations are
20 authorized by the OOE. To obtain authorization from OOE for a deviation in easement
21 width, NWN must provide OOE with the following information: 1) the location of the
22 requested deviation; 2) the reason(s) for the deviation and any documentation necessary to
23 demonstrate such reasons; 3) the proposed easement width; and 4) measures that NWN will
24 implement to mitigate additional impacts, if any, on resources protected by Council
25 standards.
26

27 In determining whether to approve the requested deviation, OOE shall provide a landowner
28 with the opportunity to comment on the requested easement and on mitigation and minimization
29 measures. OOE shall approve the requested deviation if it determines:

- 30 i. A landowner has granted a wider easement to accommodate topsoil removal and OOE
31 concurs that the wider easement is necessary to accommodate additional topsoil removal;
32 ii. A deviation in easement width is necessary to comply with other site certificate conditions;
33 iii. A deviation in easement width is required to meet federal pipeline safety standards or
34 OPUC or OSHA safety standards;
35 iv. A deviation in easement width is necessary to accommodate:
36 a) Laydown and workspace areas for HDD, slick bore, prefabrication and pipe
37 forming areas;
38 b) Staging areas for wetland, stream and road crossings and hydrostatic testing
39 withdrawal and discharge areas;
40 c) Temporary construction parking and pipe and construction material storage; or
41 d) Topsoil and subsoil storage areas for side slope or excess trench depth; or
42 e) Access to the pipeline construction easements [amendment 1]
43 v. A deviation in easement width is necessary to avoid irrigation infrastructure, existing
44 utilities, or other structures; and

- 1 vi. NWN will implement mitigation measures as consistent with state law and this site
2 certificate to mitigate or minimize any additional impacts to resources protected by Council
3 Standards.
4
- 5 8) After construction, the site, as that term is defined in ORS 469.300 and OAR 345-01-0010,
6 shall be the 40 foot wide permanent easement between the Bacona Blowdown Station and the
7 Molalla Gate Station
8
- 9 9) Before any transfer of ownership of the facility or ownership of the site certificate holder,
10 NWN shall inform the Office of Energy of the proposed new owners. The requirements of
11 OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site
12 certificate
13
- 14 10) If the Council finds that the certificate holder has permanently ceased construction or
15 operation of the facility without retiring the substantially as described in Section IV.A.6 of
16 the Proposed Order (Attachment C of the Final Order), the Council may direct the Office to
17 prepare a proposed a final retirement plan for the Council's approval. Upon the Council's
18 approval of the final retirement plan, the Council may draw on the bond or letter of credit
19 described in OAR 345-027-0020(8) to restore the site to a useful, non-hazardous condition
20 according to the final retirement plan, in addition to any penalties the Council may impose
21 under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is
22 insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional
23 cost necessary to restore the site to a useful, non-hazardous condition. After completion of
24 site restoration, the Council shall issue an order to terminate the site certificate if the Council
25 finds that the facility has been retired according to the approved final retirement plan.
26

27 **B. SITE SPECIFIC CONDITIONS UNDER OAR 345-027-0023**

- 28 1) NWN shall notify OOE, the State Building Codes Division and the Department of Geology
29 and Mineral Industries promptly if site investigations or trenching reveal that subsurface
30 conditions differ significantly from those described in the Application for Site Certificate.
31 The Council may, at such time, require the certificate holder to propose additional mitigating
32 actions in consultation with the Department of Geology and Mineral Industries and the
33 Building Codes Division.
34
- 35 2) NWN shall notify OOE, the State Building Codes Division and the Department of Geology
36 and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic
37 dikes are found at or in the vicinity of the site.
38
- 39 3) NWN shall submit to OOE copies of all incident reports involving the certified pipeline
40 required under 49 CFR §192.709.
41

42 **C. MONITORING CONDITIONS UNDER OAR 345-027-0028**

- 43 1) NWN shall establish, in consultation with affected state agencies and local governments,
44 monitoring programs as required by the Site Certificate for impact on resources protected by

1 the standards of OAR Chapter 345, Divisions 22 and 24 and to ensure compliance with the
2 Site Certificate. The programs shall be subject to the review and approval of the Council.

- 3
- 4 2) NWN shall establish monitoring programs as required by permitting agencies and local
5 governments, as required by the Site Certificate.
6
 - 7 3) If NWN becomes aware of a significant environmental change or impact attributable to the
8 facility, NWN shall submit to OOE as soon as possible a written report identifying the issue
9 and assessing the impact on the facility and any affected Site Certificate conditions.
10

11 **D. CONDITIONS UNDER OAR 345-027-0020(10)**

- 12
- 13 1) NWN shall locate the SMPE within the road right-of-way along Davis, Milne, Leisy and
14 Pleasant Valley Roads. The maintenance/operation easements for these portions of the site
15 shall be within the existing road rights-of-way. The width and location of the construction
16 easement for these portions of the site shall be governed by General Land Use Condition 5
17 (requiring that the easement be no more than 80 feet in width, beginning at the centerline of
18 the road right-of-way).
19
 - 20 2) On the Flint property, along Scholls Ferry Road, NWN shall locate the pipeline so as to avoid
21 any disruption to the 100 year old chestnut tree that is being registered as a Heritage Tree.
22
 - 23 3) NWN shall not use the Alternate Corridor Segment (along Sherwood Road, Stark Road,
24 LeBeau, Eastview, and Kruger Road) as shown on panels 24 through 26 of Exhibit K-2 of the
25 Application. The other proposed alignments for the Corridor in this segment of the facility
26 are not affected by this condition and are available for use, subject to compliance with all
27 other applicable conditions.
28
 - 29 4) All temporary access roads will take the form of a traveled path, except where a court has
30 ordered NWN to use another location and that location is permitted by the site certificate.
31 NWN shall not apply gravel to any of the farm roads unless the road is already graveled prior
32 to their use of it. [amendment 1]
33
 - 34 5) Temporary access roads outside the 200-foot corridor will be at most 30 feet wide. This
35 width was selected to accommodate the simultaneous passage of construction equipment
36 (e.g., an 11-foot track hoe) and a 10-foot-wide farm tractor with implements. [amendment 1]
37
 - 38 6) Once construction and restoration are completed, the Clean Water Services easement will
39 only be used by inspectors as a footpath except where there is an existing road. [amendment 1]
40
 - 41 7) Along the PGE power line right of way, NWN will minimize surface impact by restricting
42 right-of-way access to vehicles such as side booms and tractor-mounted winch units. NWN
43 will not cut any of the coniferous trees outside of the power transmission right-of-way.
44 [amendment 1]
45

- 1 8) There will be no clearing, grading, or ground disturbance on the workspaces and access
2 routes other than the impact of driving vehicles and storing equipment and material except to
3 remove vegetation for fire control. At the Chicken Creek bore laydown area in PGE's right-
4 of-way, brush may be cut back to facilitate side-boom access, but no grading will take place.
5 Following construction, the shrubs will be allowed to grow back. This condition is not
6 intended to preclude post-construction site restoration activities. [amendment 1]
7
- 8 9) NWN shall use existing farm roads for access on these properties: Shirazi, Wetter, Davis,
9 Leach, Oregon Parks Department, Sweningson, Downey, Klupenger, Anderson, Lais and
10 DeMartini [amendment 1].
11
- 12 10) If workspace is needed to accommodate hard surface replacement, an HDD bore, or to enable
13 special construction techniques due to unusual site specific constraints, use of the workspace
14 is contingent on NWN performing the hard surface replacement, bore or other special
15 technique. [amendment 1].
16

17 **E. CONDITIONS RELATED TO EFSC STANDARDS**

18 *Organizational Expertise Standard:*

- 19 1) NWN shall contractually all require contractors and subcontractors involved in the
20 construction and operation of the Project to comply with all applicable laws and regulations
21 and with the terms and conditions of the site certificate. Such contractual provision shall not
22 operate to relieve the certificate holder of responsibility under the site certificate.
23
- 24 2) NWN shall obtain all necessary state and local permits or approvals required for the
25 construction, operation and retirement of the Project.
26

27 *Structural Standard:*

- 28 1) NWN shall assess seismically induced damage from slope movement following any
29 earthquake that generates peak ground accelerations in excess of 0.1g along the corridor.
30
- 31 2) NWN shall design and construct the pipeline substantially in accordance with the
32 recommendations of Appendix H-1 of the Application, Section 6.1: "Hazard Mitigation."
33
- 34 3) During construction of the pipeline, NWN shall provide that construction is observed by a
35 qualified geo-professional to ensure that the recommendations contained in Appendix H-1 of
36 the Application are implemented properly and that any unforeseen field conditions are
37 reported to NWN. If changes are encountered in the field, NWN shall ensure that the
38 pipeline design is modified to provide for safe installation and operation of the pipeline.
39
- 40 4) In areas of critical geotechnical importance, trenching will not proceed without confirmation
41 that OOE and DOGAMI have been notified at least one week in advance. This notice is
42 required to afford OOE and DOGAMI the opportunity to send qualified monitoring
43 personnel, which monitoring shall be performed at NWN expense. If NWN provides timely
44 notice, the failure of OOE or DOGAMI to send qualified personnel shall not prevent NWN
45 from performing the specified work. The critical areas are defined as the corridor north of

1 the point where Dairy Creek Road terminates, and the corridor between Brookman and
2 Tooze Roads.

- 3
- 4 5) On properties to which NWN has been denied access prior to issue of this site certificate, a
5 registered geologist or geotechnical engineer shall be present during trenching along the
6 ridge north of where Dairy Creek Road terminates, and also on private property between
7 Brookman Road and the intersection with Ladd Hill Road, and shall provide to OOE a
8 written record of observations prior to pipeline operation.
- 9
- 10 6) NWN shall follow a schedule of right-of-way monitoring for landslide hazard, based on the
11 following criteria:
- 12
- 13 - immediately after 4 or more inches of rain within 48 hours
 - 14 - immediately after 6 or more inches of rain within 7 days
 - 15 - immediately after a rain on snow event that might have a similar effect as either of the
16 above precipitation events.
- 17

18 Rainfall shall be measured using METARS and RAWS, including Miller Station, as
19 described by URS.

20

- 21 7) In addition to strain gauges installed on the pipeline, NWN shall install vertical and
22 horizontal inclinometers in appropriate locations to monitor for ground movement in the
23 vicinity of the Sherman Mill slide. The installation shall be prior to or concurrent with
24 pipeline construction. NWN shall monitor these instruments and report findings to OOE
25 yearly after installation. If the instruments indicate ground movement that is different from
26 what was predicted in the ASC, NWN shall promptly report to the Council and describe any
27 corrective actions necessary to alleviate danger to the pipeline.
- 28

29 *Soil Protection Standard*

- 30 1) NWN shall use erosion prevention techniques and sediment control measures as described in
31 the Erosion Prevention and Sediment Control Manual (December 2000) jointly developed by
32 the Clean Water Agency, Washington County, Clackamas County, and the city of West Linn,
33 or its successor. Use of these measures shall not be limited to Washington County.
- 34
- 35 2) OOE will hire an independent, qualified agricultural inspector to facilitate, verify, document
36 and enforce the implementation of the AIMP. This agricultural inspector will work with
37 NWN, who will continue to have primary responsibility to implement the measures described
38 in the AIMP, in accordance with its terms. NWN will reimburse OOE for the expense of the
39 independent agricultural inspector.
- 40
- 41 3) NWN shall implement the Agricultural Impact Mitigation Plan (AIMP) (October 2001) and
42 all steps contained therein, except that the AIMP shall be modified (1) to require segregation
43 of topsoil to the "A" horizon, as opposed to the 12 inches described in the AIMP, and (2) by
44 the inclusion of an alternate method of topsoil segregation described in Addendum 1 to the
45 AIMP. As a supplement to the AIMP, NWN shall implement the Post Construction Crop

1 Monitoring Plan (PCCMP) (November 2002) and all steps contained therein. The AIMP,
2 including revisions adopted by the Council, is included as Attachment D to the Final Order.

- 3
- 4 4) NWN shall design and construct the pipeline substantially in accordance with the
5 representations made in Exhibit I of the Application for Site Certificate, March 2001.
6 Mitigation steps that are described in Exhibit I and are not listed in the AIMP are nonetheless
7 considered binding commitments by NWN and shall apply.
8
- 9 5) Site specific mitigation measures shall be tailored to the soil type, as listed in Tables I-2, I-3
10 and I-4 of the ASC.
11
- 12 6) NWN shall certify that all NWN and contract supervisory personnel with construction
13 responsibility are trained in the specific mitigation requirements described in Exhibit I, the
14 Agricultural Impact Mitigation Plan, and the Council's final order. Plans, subject matter, and
15 the schedule for this training shall be made available to OOE and ODA prior to start of
16 construction.
17

18 *Land Use Standard*

19 General Land Use Conditions

- 20 1) Definition of "Easement." For purposes of the conditions contained in this order and site
21 certificate, the term "easement" means both the area within an existing public road or
22 highway right-of-way within which the construction, operation and/or maintenance of the
23 facility is authorized by a county or state permit or other similar governmental authorization,
24 and any adjoining easement area outside of the right-of-way.
25
- 26 2) Permanent Easement: Arterials and Collectors in an EFU Zone. Where the corridor includes
27 existing public road or highway right-of-way (whether or not that right-of-way is improved)
28 within an EFU district, and the road or highway is classified by the county or by the state as
29 an arterial or collector road, the maintenance/operation easement for that portion of the
30 facility shall be located so that the edge of the easement begins at the centerline of the right
31 of way. In addition, the width of the maintenance/operation easement for this portion of the
32 facility may extend beyond the edge of existing public road or highway right-of-way by up to
33 20 feet.
34
- 35 3) Construction Easement: Arterials and Collectors in an EFU Zone. Where the corridor
36 includes existing public road or highway right-of-way (whether or not that right-of-way is
37 improved) within an EFU district, and the road or highway is classified by the county or by
38 the state as an arterial or collector road, the construction easement for that portion of the
39 facility shall be located so that the edge of the easement begins at the centerline of the right
40 of way. In addition, the width of the construction easement for this portion of the facility
41 may extend beyond the edge of existing public road or highway right-of-way by up to 50
42 feet.
43
- 44 4) Permanent Easement: Local Roads in an EFU Zone. Where the corridor includes existing
45 public road or highway right-of-way (whether or not that right-of-way is improved) within an

1 EFU district, and the road or highway is classified by the county or by the state as a local
2 road, the maintenance/operation easement for that portion of the facility shall be located so
3 that the edge of the easement begins at the centerline of the right of way. In addition, the
4 width of the maintenance/operation easement for this portion of the facility is limited to no
5 more than 40 feet, measured from the centerline of the road right-of-way.
6

7 5) Construction Easement: Local Roads in an EFU Zone. Where the corridor includes existing
8 public road or highway right-of-way (whether or not that right-of-way is improved) within an
9 EFU district, and the road or highway is classified by the county or by the state as a local
10 road, the construction easement for that portion of the facility shall be located so that the
11 edge of the easement begins at the centerline of the right of way. In addition, the width of
12 the construction easement for this portion of the facility is limited to no more than 80 feet,
13 measured from the centerline of the road right-of-way.
14

15 6) General Width Restrictions (All Zones). Unless otherwise allowed by these conditions, the
16 permanent easements for the facility are limited to no more than 40 feet in width, and the
17 temporary/construction easements are limited to no more than 80 feet in width. See also,
18 Mandatory Conditions 7 and 8. In the event of any conflict between this condition,
19 conditions 2-5 above, or mandatory conditions 7 or 8, the following priority shall control: (a)
20 Mandatory Condition 7 shall take first priority in the event of any conflict involving a
21 temporary/construction easement; (b) General Land Use Conditions 2-5 shall take next
22 priority; and (c) the general widths of 40 and 80 feet specified in this condition and in
23 mandatory conditions 7 and 8 shall control to the extent that (a) and/or (b) do not.
24

25 7) Conflict with Existing Utility Lines. Notwithstanding conditions 2, 4 and 6, above, where
26 there are existing utility lines in that portion of the public road or highway right-of-way
27 where the facility would otherwise be located, the maintenance/operation easements for the
28 facility may extend outside of the existing road or highway right-of-way by up to 20 feet,
29 regardless of the classification of the road and regardless of the resulting overall width of the
30 easement.
31

32 8) Conflict with Safety Regulations. Notwithstanding conditions 2, 4 and 6, above, the
33 maintenance/operation easements for the facility may extend further outside of existing road
34 or highway right-of-way (than otherwise allowed by conditions 1-7, above) where necessary
35 to comply with safety regulations of Oregon Occupational Safety and Health Administration
36 or the Oregon Public Utilities Commission.
37

38 9) Split Zone Corridor. Where the corridor includes lands on both sides of a public road, and
39 those lands are zoned EFU only on one side of the road, NWN shall locate the facility on the
40 side of the road that is not zoned EFU except where NWN demonstrates that it would be
41 necessary to remove or displace a building to stay on the non-EFU side. This condition may
42 be relaxed if using the non-EFU side would unavoidably result in the pipeline being less than
43 40 feet from a building used for human occupancy.
44

1 10) Avoidance of Category 1 or Category 2 Habitat. If the construction or permanent easements
2 in or adjacent to road right-of-way would affect Category 1 or Category 2 habitat as
3 described in section IV.7 of the Proposed Order (Attachment C of the Council's final order),
4 the construction or permanent easement may be sited on land in the EFU zone that is not
5 within the existing road right-of-way, to the extent necessary to avoid Category 1 or 2
6 habitat. In such cases the easement shall be located as close to the road right-of-way as
7 possible. This permission shall not apply if the habitat will be avoided through HDD or other
8 boring techniques. EFU land that is not in the public road right-of-way shall not be used to
9 avoid habitat of category 3 or lower.

10
11 11) Where the corridor for the facility includes the right-of-way of the existing South Mist
12 Feeder line, the permanent easement for the facility shall follow the existing SMF line and
13 the width of the right-of-way for the two pipelines shall not exceed 40 feet.

14
15 12) Easements allowed under Amendment #1. (a) Notwithstanding conditions 2 and 6, the
16 permanent maintenance easements on the Nordstrom and Schmidt Limited Partnership
17 properties (NWN Application for Amendment 1 Exhibit 4 panel 40) may be 60 feet in total
18 width including 30 feet of private easement, where the easement includes the drip lines of an
19 ash tree (Nordstrom property) and an oak tree (Schmidt property) and a permanent access
20 easement is allowed access the Clean Water Services property on panel 14. (b)
21 Notwithstanding conditions 3,5 and 6: (1) if a landowner requests topsoil storage on the
22 landowner's property in a location outside the 80-foot easement width, NW Natural may
23 acquire and utilize a temporary easement covering such other location. The selected location
24 may not alter the contour or drainage in any flood hazard zone and may not affect any
25 wetland as that term is defined in the Oregon State Land Division's wetland delineation
26 criteria. All topsoil so stored shall be returned to its original location in or along the pipeline
27 trench.; and (2) the temporary access and construction laydown easements described and
28 shown in Exhibits 3, 4 and 5 to Application for Amendment 1 to the site certificate are
29 authorized. [amendment 1]

30
31 Wash. Co. Floodplain and Drainage Hazard Regulations (WCC § 421), Erosion Control
32 Regulations (WCC § 426), and Grading and Drainage Regulations (WCC § 410):

- 33
34 1) NWN shall obtain from the Washington County Operations Division, and its equivalent in
35 Clackamas and Marion counties, all required utility permits to allow construction of the
36 pipeline within the County road right-of-way. A copy of the permit shall be submitted to the
37 Land Use planner for that county.
38
39 2) NWN shall provide the Washington County Land Development Division Project Planner,
40 and the equivalent in Clackamas and Marion counties, with a copy of any permits from the
41 Oregon Division of State Lands and/or the U.S. Army Corps of Engineers for work that will
42 be done in flood plain areas within those counties.
43
44 3) Prior to construction, NWN shall provide Washington County with the detailed grading plan
45 and obtain a grading permit from Washington County pursuant to WCC § 410.

- 1
- 2 4) NWN shall obtain equivalent utility and grading and drainage permits in Clackamas and
- 3 Marion Counties as applicable.
- 4
- 5 5) Prior to construction, NWN shall provide the Washington County Land Use Department with
- 6 the floodplain delineations meeting the requirements of WCC 421-1.2 A, B, and C.
- 7
- 8 6) Prior to construction, NWN shall submit detailed topographic information meeting the
- 9 requirements of WC 421-3, prepared by civil engineer registered in Oregon.
- 10
- 11 7) NWN shall implement the mitigation measures in the "Flood Hazard Impact Mitigation Plan"
- 12 submitted as Appendix K-10 of the ASC.
- 13
- 14 8) NWN shall provide a statement by a registered civil engineer affirming that the pipeline
- 15 conforms with the standards of WCC § 421-10.
- 16
- 17 9) NWN shall perform any maintenance on the maintenance easement outside public right of
- 18 way by means of hand implements (under WCC 421-14 lawn mowers are considered hand
- 19 implements).
- 20
- 21 10) Excess soils generated by trench excavation and backfill shall be hauled off of the pipeline
- 22 alignment and disposed of in an approved fill site area. Surface conditions shall be restored
- 23 to pre-construction slopes and grades and disturbed areas shall be revegetated.
- 24
- 25 11) If the pipeline crosses a stream or drainage hazard area, it shall be installed six feet below the
- 26 bottom of the natural channel. The channel shall be restored to its original conditions.
- 27
- 28 12) NWN shall allow no above ground structures that will catch debris or impede floodwater
- 29 flow. Protective fencing required around above ground facilities shall be designed not to
- 30 impede floodwater flow.
- 31
- 32 13) The existing grades and dimensions of the floodway shall not be changed. Trench
- 33 excavations that have disturbed vegetation shall be revegetated.
- 34
- 35 14) NWN shall not dump fill material in a flood area without a permit from Washington County.
- 36
- 37 15) NWN shall equalize cut and fill and shall certify at the completion of construction of the
- 38 pipeline that no net fill has occurred in flood hazard areas, except for post-construction
- 39 "crowning" to allow for soil settlement.
- 40
- 41 16) NWN shall observe Washington County's preference for enhancement of riparian habitats
- 42 through planting or other such improvements. WCC Section 421-4.6B recommends the
- 43 planting of "at least 5 plants per 100 feet of bank area."
- 44

1 17) NWN shall implement the Erosion and Sediment Control Plan submitted as ASC Exhibit K-
2 11. Note – the Washington County 1991 Manual is replaced by the CWA Erosion
3 Prevention and Sediment Control Manual dated 12/2000
4

5 18) Prior to construction, NWN shall provide OOE with documentation of Washington County
6 review of the final Erosion Control Plan.
7

8 Other Conditions Requested by Washington County

9 19) For any section of the pipe placed under the road, NWN shall restore the road to pre-
10 construction condition or better, and to a standard designed for normal traffic loading for a 20
11 year life.
12

13 20) NWN shall consult with the appropriate County's operations department regarding load
14 capacity for any bridges utilized during construction.
15

16 21) NWN shall coordinate any road closures through the affected County.
17

18 22) NWN shall not deposit spoils from the Tualatin Valley highway bore within the M-2 district
19 in Hillsboro.
20

21 23) Construction hours for the project are 7:00 AM until 7:00 PM daily except for Sundays. If
22 work is proposed after these hours or on Sunday, NWN must obtain a variance from
23 Washington County noise standards.
24

25 24) NWN shall contact the Oregon Heritage Tree program during planning and construction to
26 protect the tree resource located on highway 219 south of Hillsboro.
27

28 Agricultural Mitigation Conditions under ORS 215.275(5)
29

30 1) Crops prohibited over the pipeline shall be limited to mature fruit and nut trees, and ball and
31 burlap nursery crops and other crops that require any mechanical digging or hand digging
32 deeper than 3 feet. Additionally, Christmas trees that are more than 10 years old, fence posts
33 and other support posts, and other large trees shall be prohibited. Such crops and posts shall
34 not be allowed within 5 feet of the pipe centerline, for a total width of 10 feet. Farmers may
35 install fencing or cross the pipeline above or below the pipe for water service and drainage
36 with prior notification to and written approval by NWN, which approval shall not be
37 unreasonably withheld. Permanent surface structures and permanent reforestation activities
38 are prohibited over the entire 40-foot permanent easement area.
39

40 2) NWN shall not preclude use of propane blasters for gopher control on private property near
41 the easement. The company shall analyze and negotiate the use of such equipment in close
42 proximity to the pipeline.
43
44
45

1 Site Specific Land Use Conditions

- 2
- 3 1) In the corridor along Brookman Road, NWN shall locate the pipeline either within road right
- 4 of way or in exception lands to the north of the road, unless
- 5 a) NWN submits evidence to the Council that it has attempted to obtain the necessary
- 6 wetlands permits from DSL and the US Army Corps of Engineers and cannot obtain
- 7 one; or
- 8 b) NWN obtains concurrence from OOE that the category 3 habitat cannot feasibly be
- 9 mitigated consistent with the ODFW Habitat Mitigation Goals as required by OAR
- 10 345-022-0060.
- 11
- 12 2) Along Dryland, Zimmerman and Heinz Roads, the SMPE shall be located within the
- 13 Preferred Corridor.
- 14

15 Special Conditions for Temporary Laydown Area

- 16
- 17 1) Prior to the temporary, construction-related use of any laydown area shown on Appendix K-2
- 18 of the ASC, as supplemented in July 2001, that is outside the 200-foot pipeline corridor (the
- 19 temporary laydown areas) , NWN shall provide the Office of Energy with a map, aerial
- 20 photograph or other depiction of the proposed temporary laydown area, together with a
- 21 description of the temporary laydown area, including the zoning, physical conditions,
- 22 existing uses, and any fieldwork studies performed at the temporary laydown area.
- 23
- 24 2) Use of the temporary laydown areas shall conclude within one month of the date construction
- 25 is complete. Mitigation for impacts to habitat and farm land shall be completed as soon as
- 26 reasonably possible after the temporary use is concluded.
- 27
- 28 3) The temporary laydown area shall not (1) be located within an area identified as Category 1
- 29 or 2 habitat; or (2) contain threatened or endangered species identified in Exhibit Q. It is
- 30 expressly understood that the approval is only for temporary uses and no permanent uses will
- 31 be allowed in these areas.
- 32
- 33 4) NWN shall restore, as nearly as possible, to its former condition any agricultural land and
- 34 associated improvements that are damaged or otherwise disturbed by the siting, maintenance,
- 35 repair or reconstruction of the facility. Mitigation conditions applicable under the Council's
- 36 Soils standard, OAR 345-022-0022, shall apply to any temporary laydown area.
- 37
- 38 5) Conditions (1) through (4) above shall apply to the temporary easements described in
- 39 Exhibits 3,4, and 5 of Application for Amendment 1. [amendment 1]
- 40

41 *Protected Areas Standard*

- 42 1) During construction of the pipeline Willamette River crossing, NWN shall protect riparian
- 43 areas on both sides of the river by locating all bore holes for directional drilling at least 200
- 44 feet from the river's edge on the north side of the river, and 400 feet from the edge on the
- 45 south side of the river.

1 *Retirement and Financial Assurance Standard*

- 2 1) Prior to beginning construction, the certificate holder shall submit to the State of Oregon
3 through the Council a bond or letter of credit in the amount of \$700,000 (in 2001 dollars)
4 naming the State of Oregon, acting by and through the Council, as beneficiary or payee.
5 a) The calculation of 2001 dollars shall be made using the U.S. Gross Domestic Product
6 Implicit Price Deflator, as published by the U. S. Department of Commerce, Bureau of
7 Economic Analysis, or any successor agency (the “Index”). The amount of the bond or
8 letter of credit account shall increase annually by the percentage increase in the Index and
9 shall be pro-rated within the year to the date of retirement. If, at any time, the Index is no
10 longer published, the Council shall select a comparable calculation of 2001 dollars. The
11 form of the bond or letter of credit and identity of the issuer shall be subject to approval
12 by the Council.
13 b) The bond or letter of credit shall not be subject to revocation or reduction prior to the
14 certificate holder’s satisfaction of Condition (2) below.
15
16 2) Upon completion of construction, NWN may reduce the amount of the bond or letter of
17 credit to \$86,000 (in 2001 dollars) naming the State of Oregon, acting by and through the
18 Council, as beneficiary or payee (the “Retirement Fund”). The calculation of 2001 dollars
19 shall be made using the Index. The form of the Retirement Fund and identity of the issuer of
20 the bond or letter of credit shall be subject to approval by the Council. The Retirement Fund
21 shall not be subject to revocation or reduction prior to retirement of the energy facility.
22
23 3) The certificate holder shall describe the status of the Retirement Fund in the annual report
24 submitted to the Council, pursuant to OAR 345-026-0080.
25
26 4) If the project is halted prior to completion, NWN shall restore any right of way that has been
27 disturbed. NWN shall be responsible for backfilling of any open ditch, revegetation and
28 restoration costs and any damages to rights of way as specified in easements.
29
30 5) Prior to termination of the Site Certificate, NWN shall retire the site sufficiently to restore it
31 to a useful condition. Site restoration shall include, but not be limited to, steps to:
32 (a) Remove any hazardous material stored in buildings or located in process equipment
33 and dispose of them following applicable state hazardous materials statutes and rules,
34 (b) Remove above ground portions of all pipelines, and cut and cap the remaining portion
35 in five mile increments and at each end. NWN shall purge the pipeline to ensure that
36 all natural gas is removed.
37 (c) If necessary, revegetate the area, including pipeline right of ways, to prevent erosion
38 and encourage habitat development,
39 (b) Inspect all pipelines and remove any hazardous materials found, and dispose of
40 hazardous materials generated from cleaning the pipelines in accordance with
41 applicable state hazardous materials statutes and rules.
42
43 6) If the Council finds that NWN has permanently ceased construction or operation of the
44 SMPE without retiring the SMPE according to a final retirement plan approved by the
45 Council as described in OAR 345-027-0110, the Council shall notify NWN and request that

1 NWN submit a proposed final retirement plan to the Office within a reasonable amount of
2 time, not to exceed 90 days. If NWN does not submit a proposed final retirement plan by the
3 specified date, the Council may direct the Office to prepare a proposed final retirement plan
4 for the Council's approval. Upon the Council's approval of the final retirement plan, the
5 Council may draw on the bond or letter of credit described in condition (1) of this section to
6 restore the site to a useful, non-hazardous condition according to the final retirement plan, in
7 addition to any penalties the Council may impose under OAR Chapter 345 Division 29. If
8 the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement,
9 the certificate holder shall pay any additional cost necessary to restore the site to a useful,
10 non-hazardous condition. After completion of site restoration, the Council shall issue an
11 order to terminate the site certificate if the Council finds that the SMPE has been retired
12 according to the approved retirement plan.

13 14 *Fish and Wildlife Habitat Standard*

15 General

- 16 1) NWN shall take appropriate and reasonable measures to first avoid, then reduce, then restore,
17 and then compensate for impacts to fish and wildlife habitat that result from construction and
18 operation of the proposed project consistent with that habitat category.
- 19
20 2) NWN shall reimburse the Office of Energy for costs associated with on-site construction
21 inspection monitoring by either OOE or ODFW.
- 22
23 3) NWN shall construct the pipeline within the construction corridor along the preferred
24 alignment (the "preferred alignment construction corridor") that was the basis for
25 Supplemental Table P-4 (May 15, 2002), Supplemental Table P-5 (March 5, 2002) and the
26 memo from Meehan, OOE, to Hayward, NWN, dated May 22, 2002, and the Hayward reply
27 to Meehan dated June 12, 2002. NWN may deviate from this construction corridor if there is
28 a conflict with other conditions of the site certificate, requirements of other state, local or
29 federal agencies, public health and safety, or if new information is discovered during
30 construction that was not known prior to issuance of the site certificate.
- 31
32 4) Where NWN must deviate from the preferred alignment construction corridor within the 200-
33 foot Preferred Corridor or an Alternative Corridor Segment, NWN shall obtain permission
34 from OOE for the following deviations: 1) any stream crossing that will not be bored as
35 shown in Supplemental Table P-4 (May 15, 2002); 2) any deviation that would result in
36 impact to a wetland with a higher status code than shown in the April 9, 2002 PHS table; 3)
37 any deviation that would result in impact to Category 3 upland habitat subtypes (as described
38 in Table P-1, Exhibit P) as shown in Supplemental Table P-5 (March 5, 2002). NWN shall
39 not begin construction in a deviation until it has notified OOE and the OOE has approved the
40 requested deviation.
- 41
42 5) To obtain permission from the OOE for a deviation from the preferred alignment
43 construction corridor, NWN must provide OOE the following information prior to disturbing
44 the deviation area: 1) the location of the requested deviation; 2) the habitat categories and
45 habitat subtypes of the original preferred alignment construction corridor referenced to

1 Supplemental Table P-4 (May 15, 2002), Supplemental Table P-5 (March 5, 2002) and the
2 PHS April 9, 2002 table; 2) the habitat categories and habitat subtypes within the requested
3 deviation referenced to the tables listed above; 3) the number of trees greater than 6-inch dbh
4 that would be removed; 4) the reason for the deviation; and 5) any measures that NWN
5 proposes to use to limit impact to fish and wildlife habitat in the deviation. If the deviation is
6 due to unanticipated conditions during excavation, NWN shall notify OOE using the field
7 method described in the following paragraph.

8
9 The field method includes the following steps:

- 10 (1) Identification of a problem with construction in a particular segment of the
 - 11 original preferred alignment;
 - 12 (2) Identification of an alternative segment;
 - 13 (3) Verbal notification of the Office of Energy and, as appropriate, other
 - 14 agencies;
 - 15 (4) Technical review of the alternative segment to ensure that construction in the
 - 16 alternative segment, taking mitigation into account, would not result in
 - 17 significant adverse impacts to resources protected by Council standards or
 - 18 other permitting criteria;
 - 19 (5) Review of zoning to ensure compliance with local land use laws;
 - 20 (6) Provision of information from steps (4) and (5) to OOE;
 - 21 (7) OOE site inspection, with involvement of other agency personnel, as
 - 22 appropriate; and
 - 23 (8) OOE concurrence, generally verbal, with construction in the alternative
 - 24 segment.
- 25
26
- 27 6) The decision criteria for OOE approval of a deviation requested by NWN shall include: 1)
 - 28 whether the deviation would result in a smaller area of impact; 2) whether the deviation
 - 29 would result in impact to the same, a lower or a higher category habitat; and 3) whether
 - 30 NWN provided appropriate documentation to OOE within the necessary time frame.
 - 31
 - 32 7) NWN shall plan, construct, operate, restore, maintain and monitor and the project site
 - 33 consistent with the measures identified in its September 2001 Wetland Mitigation Plan,
 - 34 Section 2.5 "Construction Techniques" pages 2-4 to 2-11; Section 4.0 "Conceptual
 - 35 Mitigation Approach" pages 4-1 to 4-2; Section 5.0 "Proposed Conceptual Mitigation" pages
 - 36 5-1 to 5-3; Section 7.0 "Monitoring" page 7-1; and Section 8.0 "Maintenance and
 - 37 Contingency Plan" page 8-1.
 - 38
 - 39 8) NWN shall plan, construct, operate, restore, maintain and monitor the project consistent with
 - 40 the measures identified in its September 2001 Habitat Mitigation Plan, Section 2.2
 - 41 "Mitigation Goals" page 2-4; Section 2.5 "Construction Techniques" page 2-5; Section 4.0
 - 42 "Proposed Conceptual Mitigation by Category" pages 4-1 to 4-3; Section 5.0 "Performance
 - 43 Goals" page 5-1; Section 6.0 "Monitoring" page 6-1; and Section 7.0 "Maintenance Plan"
 - 44 page 7-1.
 - 45

- 1 9) NWN shall plan, construct, operate, restore, maintain and monitor the project consistent with
2 the measure identified in Exhibit P of its March 2001 application for site certificate as
3 supplemented by the June 2001 supplemental Exhibit P.
4
- 5 10) NWN shall construct the project so as to avoid disturbance to all Category 1 habitat and all
6 Category 2 permanent ponds.
7
- 8 11) NWN shall provide a net-benefit to Category 2 habitats that are disturbed by construction.
9 This may include, but is not limited to, placing large woody debris, clean sand, gravel and
10 rocks within the stream channel at or near the crossing location of Category 2 streams,
11 enhancing habitat quality by planting trees and other woody vegetation or by other measures
12 that provide a net benefit that is acceptable to the Office of Energy in consultation with the
13 Oregon Department of Fish and Wildlife.
14
- 15 12) NWN shall use Best Management Practices (BMPs) to confine construction-related
16 disturbance to the construction corridor.
17
- 18 13) NWN shall not disturb wetland areas, riparian areas, or waterways until it has obtained all
19 required section 401 and section 404 permits and approvals, including any required
20 authorization relating to a federally-listed threatened or endangered species. If the conditions
21 in the amended site certificate conflict with conditions imposed by the DEQ in its section 401
22 certification or the U.S. Army Corps in its section 404 permit, NWN shall consult with OOE
23 and ODFW to resolve the conflict before beginning construction
24

25 Pre-construction

- 26 14) NWN shall incorporate the conditions of the site certificate into its construction documents.
27
- 28 15) NWN shall provide a copy of its construction documents to the Office before beginning
29 ground-disturbing activity (such as clearing or grading the construction corridor). These
30 shall include five complete sets of detailed maps of the construction corridor that are cross
31 referenced or indexed to habitat category maps provided to OOE.
32
- 33 16) NWN shall mark the construction corridor to indicate areas where the corridor will be
34 restricted to avoid impact to wetlands, riparian areas, streams and other sensitive, important
35 or significant areas before any ground-disturbing activity (including clearing of vegetation).
36 OOE shall be notified when marking is completed and OOE inspectors shall be afforded the
37 opportunity to inspect the marked construction corridor prior to any ground-disturbing
38 activity.
39
- 40 17) NWN shall document pre-construction conditions at each Category 2 and 3 site within the
41 construction corridor prior to any ground disturbing activity. Documentation shall include an
42 Impact Inventory, including a cross reference to habitat and construction maps, description of
43 the habitat category and habitat unit to be impacted, the number of trees and sizes to be
44 removed, percent native shrub coverage, percent reed canary grass and noxious weed
45 coverage, the acreage of the impacts and photographs of all stream crossings prior to

1 clearing. The Impact Inventory will form the basis of the mitigation and will be included in
2 the Detailed Mitigation Plan. The Impact Inventory shall be prepared by a qualified
3 biologist.

4
5 18) NWN shall give the Office at least 7 days notice before beginning ground-disturbing activity.
6

7 19) NWN shall designate a qualified Environmental Inspector to work on all phases of the
8 project, including pre-construction documentation, pipeline construction, restoration, post
9 construction monitoring and preparation of the Detailed Mitigation Plan. The Environmental
10 Inspector shall have the authority to stop construction activity temporarily to resolve
11 environmental issues.
12

13 20) NWN shall, before beginning ground-disturbing activity, identify to the Office the key
14 personnel responsible for construction and environmental protection, including but not
15 limited to NWN environmental inspectors and the pipeline construction company's
16 environmental inspectors.
17

18 21) NWN shall, before beginning ground-disturbing activity, conduct training of key employees
19 and contractor personnel. Training shall cover applicable environmental regulations,
20 including site certificate conditions that relate to fish and wildlife habitat, and NWN
21 procedures for limiting impact to fish and wildlife habitat. NWN shall provide the Office
22 advance notice of the time and place of training sessions and shall allow Office
23 representatives to attend training sessions.
24

25 Construction

26 22) NWN shall use straw and straw bales of oats, wheat, barley and red fescue that are certified
27 to be free of noxious (as that term is defined in ODA regulation) and nuisance weed
28 contamination for both temporary and permanent erosion control in all category 1, 2 and 3
29 habitats, including uplands (Exhibit I, pages I-42, 43, 49, AIMP 18, 19)
30

31 23) NWN shall use topsoil protection measures on all Category 2 and 3 habitats, including
32 upland habitats shown in Table P-1 (March 2001 Application), except permanent ponds (PP2
33 and PP3). Topsoil and subsoil shall be removed and stored separately and backfilled in the
34 reverse order (Conceptual Mitigation Plan, Part 1, Section 2 and CMP, Part 2, Section 2.5).
35 If excavated topsoil contains plants proposed for salvage and re-planting, it shall be replaced
36 within 24-hours. If the topsoil needs to be stored for more than 1 day, it will be covered with
37 geotextile fabric and moistened to prevent drying and to ensure the viability of the plant
38 species present (CMP, Part 1, Section 5.1).
39

40 24) NWN shall, as necessary, use soil compaction mitigation measures on all Category 2 and 3
41 habitats, including uplands. Backfilled soils shall resemble pre-construction soil profiles and
42 compacted soil surfaces shall be hand raked or scarified by appropriate equipment prior to
43 seeding.
44

- 1 25) NWN shall use, if necessary, imported soil that is free of noxious weeds and reed
2 canarygrass in Category 2 and 3 habitats, including uplands. NWN shall, prior to
3 construction, submit to the Oregon Office of Energy the procedures it will use to ensure that
4 imported soils are free of noxious weeds and reed canarygrass.
5
- 6 26) NWN shall reduce and control increased sediment and turbidity by: 1) locating crossings to
7 avoid unstable stream banks and the need to remove large trees; 2) dewatering the
8 construction reach during construction (by using a dam-and-flume or hose-and-pump to pass
9 water around the construction area); 3) routing water pumped from trenchlines to temporary
10 surface water detention facilities prior to discharge; 4) using erosion and sediment controls
11 during and after construction; 5) monitoring turbidity during construction; 6) stabilizing
12 stream banks and stream beds after construction; and 7) any other measures that may be
13 appropriate.
14
- 15 27) NWN shall prevent stream bank instability after construction by: 1) locating crossings to
16 avoid unstable stream banks and the need to remove large trees; 2) stabilizing affected stream
17 banks and 3) using Best Management Practices (BMPs) to control slope erosion after
18 construction.
19
- 20 28) NWN shall prevent stream bed erosion after construction by restoring stream beds to their
21 original condition (substrate and gradient), using appropriate geotextile fabrics or other
22 measures, and adding large rocks and or gravel if needed.
23
- 24 29) NWN shall prevent loss of spawning substrate by restoring stream beds to their original
25 conditions, including replacing spawning gravels, and using appropriate measures to control
26 or prevent the movement of soil and silt into streams.
27
- 28 30) NWN shall reduce the direct impacts to wetland habitats by: 1) confining construction
29 activities to a 40-foot wide construction corridor and minimizing heavy equipment use within
30 wetlands to the extent practicable; 2) constructing in wetlands when they are dry, to the
31 extent practicable; 3) using construction mats when appropriate; 4) removing topsoil
32 (including plant roots) from the trench separately from subsoil, stockpiling topsoil and
33 subsoil separately and placing the topsoil (including plant roots) on top of the subsoil when
34 backfilling the trench; 5) installing water barriers along the pipeline trench and restoring
35 impermeable soils to prevent draining wetlands; 6) using Best Management Practices
36 (BMPs) to control erosion and turbidity and to prevent movement of loose soil beyond the
37 construction corridor.
38
- 39 31) Where wetlands and streams must be crossed, the pipeline will be routed through the least
40 sensitive portions of the wetland or stream if it is feasible. The scrub-shrub and forested
41 portions of wetlands and riparian areas shall be avoided to the greatest extent possible.
42
- 43 32) Construction staging areas shall be located in upland and clearly marked with signs and
44 temporary fencing.
45

- 1 33) Equipment refueling shall occur a minimum of 100 feet from any wetland or stream channel
2 and within a designated area. The refueling station should be equipped with appropriate
3 hazardous spill containment/clean up materials.
4
- 5 34) Construction through streams with flowing water and adjacent wetlands will occur during the
6 designated ODFW-approved “in-water work times”.
7
- 8 35) NWN shall complete each stream crossing within a 24-hour period, if practicable. If the
9 crossings require more than 24 hours to complete, appropriate methods to allow upstream
10 and downstream fish passage for all life stages shall be implemented using methods approved
11 by ODFW.
12
- 13 36) NWN shall provide a qualified biologist on-site to prevent stranding fish and large aquatic
14 invertebrates in the diversion reach during construction across Category 2 and Category 3
15 streams. The qualified biologist must be authorized by NWN to have stop activity authority
16 if necessary to prevent stranding fish and large aquatic invertebrates.
17
- 18 37) All flow diversions shall be removed and the hydrology of the site restored immediately after
19 completion of construction. The stream channel morphology shall be restored to pre-
20 construction conditions including riffle-pool morphology and stream channel substrate. In
21 streams with gravel bottoms, appropriate sized gravel from local sources will be used to
22 replace any stream gravels that are lost as a result of construction. Streambanks will be
23 stabilized and revegetated as soon as practical after construction is completed.
24
- 25 38) NWN shall locate stream crossings to avoid removal of large (>6” dbh) trees where
26 practicable and reduce the construction corridor from 80 feet in width to 40 feet within
27 riparian and wetland habitats.
28
- 29 39) NWN shall provide new woody debris in Category 2 habitats where appropriate and as
30 necessary to provide a net benefit in habitat quantity or quality as determined by a qualified
31 fisheries biologist. In-stream woody debris dimension, structure design and placement shall
32 conform to criteria outlined in A Guide to Placing large Wood in Streams, May 1995
33 (Oregon Department of Forestry and Oregon Department of Fish and Wildlife), as
34 determined by a qualified fisheries biologist.
35
- 36 40) In wetlands and riparian areas, vegetation that must be removed will be cut at ground level,
37 leaving the root system intact. Pulling tree stumps and associated grading activities will be
38 limited to those tree stumps that would directly interfere with trenching, pipe installation and
39 backfill.
40
- 41 41) Clay trench plugs will be used to prevent diversion of subsurface water from wetlands.
42 Trench plugs will be installed at each end of wetland crossings to prevent diversion of
43 subsurface water from wetlands and avoid changes to wetland hydrology. An environmental
44 monitor will inspect the pipeline trench to check for impermeable soil layers that may be
45 penetrated during trenching. If impermeable layers are found in the trench, they will be

1 avoided where this is possible, or repaired with clay plugs after the pipe is in place. Clay
2 barriers should be installed on each side of any wetland crossing site.

3
4 42) Matting will be used where this is necessary to support construction equipment in wetlands.
5 Heavy construction equipment may work without construction mats in wetlands that are
6 farmed, grazed or dry enough to support the equipment. In wetlands that are not dry enough
7 to support the equipment, all construction activities will be carried out from the matting.
8 Where matting is necessary, equipment will not be allowed in the wetland off the mats, at
9 any time. The mats will be cleaned and inspected prior to placing in the wetland and mats
10 with foreign material will not be used.

11
12 43) Any trees felled within category 2 and 3 habitats shall remain within the habitat site as
13 woody debris. Trees felled within the riparian area shall be used on site for instream habitat
14 structures. If possible the trees should be pushed over to maintain the root ball with the tree
15 trunk.

16
17 44) NWN shall replant appropriate species and numbers of trees or shrubs as indicated by the
18 Impact Inventory in all Category 2 and Category 3 habitats in which NWN removes trees or
19 shrubs. Shrubs or trees less than 6-inch dbh shall be replaced at a 1-to 1 ratio. Trees equal to
20 or greater than 6-inch dbh shall be replanted on a replacement ratio as follows:

21

Size of Tree to be removed (inches dbh)	Number of trees to be planted (24-36" height)
6 to 12	4
13-18	6
19-24	8
25-30	10
Over 30	12

22
23 45) NWN may salvage and restore native plants removed intact from the pipeline trenching area.

24
25
26 46) NWN shall, at an appropriate location, thoroughly clean each unit of construction equipment
27 with high-pressure washing before the initial move of that unit to the construction site. NWN
28 shall, at an appropriate site, clean all construction mats that have been previously used before
29 moving them to the construction site or placing them in a wetland.

30
31 47) NWN shall, at appropriate locations, thoroughly clean each unit of construction equipment
32 before working in category 2 or 3 wetlands.

33
34 48) NWN shall restore the construction corridor in category 2 and 3 habitats by replanting and
35 seeding with an approved seed mix to re-establish vegetation. NWN shall provide OOE the
36 proposed ODFW-approved seed mix for review and approval prior to ground disturbing
37 activity. Substitutions to the approved seed mixes must be approved by OOE.

- 1
2 49) The following actions must be performed immediately after backfilling the trench in trenched
3 areas: (1) installation of erosion control measures; (2) seeding and mulching of exposed soils;
4 (3) returning all stream beds and banks to pre-construction grade; (4) restoration of salvaged
5 plant materials and; (5) placement of woody debris.
6
7 50) NWN must plant trees and shrubs, as indicated by the Impact Inventory and the Detailed
8 Mitigation Plan approved by OOE, within 1 year of construction.
9
10 51) NWN shall prepare and submit to OOE for review an Impact Inventory protocol prior to
11 ground disturbing activity. The protocol shall include a standardized data sheet and
12 inventory format with all information stated in Condition 17, as well as cross references to
13 habitat and construction maps. Copies of the field-completed impact inventory forms shall
14 be available for review by OOE inspectors at the job site.
15
16 52) In the event of a release of drilling mud as a result of boring operations during pipeline
17 construction, NWN shall stop the boring operation until a siltation fence is placed around the
18 release point. NWN shall insure that the release point is fully encircled with siltation fencing
19 and that the fencing effectively contains the released mud. The drilling mud will be allowed
20 to vent into the enclosure. NWN shall pump drilling mud from the enclosed area as needed
21 until the boring operation is completed. If the enclosure becomes nearly full, NWN shall
22 remove the drilling mud via a vacuum truck or pump depending on accessibility to the site.
23 NWN shall leave the siltation fencing in place during the boring, back reaming, and pipe-
24 pulling procedures, and until the vent has sealed. NWN shall not remove the enclosure until
25 all evidence of the release has ceased.
26

27 Post-Construction

28

- 29 53) NWN shall prepare and submit to OOE a Detailed Mitigation Plan (DMP) within 60 days
30 following the “used and useful” declaration to the OPUC.
31
32 54) In the DMP, NWN shall:
33 (a) include the Impact Inventory for all segments of the pipeline;
34 (b) describe mitigation measures undertaken during the construction phase;
35 (c) propose specific additional mitigation measures that will achieve the fish and wildlife
36 habitat mitigation goals and standards of OAR 635-415-0025 and prevent harm to the
37 federally listed Upper Willamette River steelhead trout and Upper Willamette River
38 Chinook salmon; including species, sizes, and quantities of proposed plantings;
39 (d) identify contingency measures, and remedial measures to ensure success criteria are
40 met; and
41 (e) provide a realistic schedule for implementation of the DMP.
42
43 55) The Office, in consultation with other agencies, shall review the Draft DMP and provide
44 NWN with its comments, including changes to the DMP, if necessary within 30 days of
45 receipt of the DMP.

1
2 56) Within 30 days following the receipt of OOE comments, NWN shall prepare and submit to
3 OOE a Final DMP that incorporates agency comments. The Final DMP shall provide the
4 basis for the monitoring report.

5
6 57) NWN shall monitor the results of implementing the Final DMP and shall provide annual
7 reports to the Office and other agencies for a minimum of three years. The monitoring
8 reports shall include the Impact Inventory and provide documentation about
9 restoration/enhancement methods, survival of salvaged and planted plants, assessment of
10 streambank stability, net benefit in category 2 habitats, photographs from established pre-
11 construction points, including all stream crossings, discussion of success criteria and
12 remedial actions. The reports shall be prepared by a qualified biologist and submitted to the
13 Office and ODFW by December 1.

14
15 58) Success Criteria shall include meeting the ODFW fish and wildlife mitigation goal for each
16 habitat category. In addition, restored areas shall, after 3 years, have: (1) the same number of
17 native trees and shrubs as calculated for replacement in the Impact Inventory and according
18 to the required replacement ratios (this may include native plant volunteers); (2) less than 20
19 percent coverage of reed canary grass and noxious weeds (as defined by Oregon Department
20 of Agriculture and local counties) in habitat units having pre-construction coverage of these
21 plants less than 20 percent and as documented in the impact inventory.

22
23 59) NWN shall take remedial actions if monitoring shows that implementation of the Final DMP
24 is not successful and monitoring shall continue until the success criteria is met.

25
26 Operation and Maintenance

27
28 60) NWN shall allow native vegetation, including trees, within the Maintenance Easement,
29 except in a ten-foot-wide zone over pipeline, in all Category 2, Category 3 and Category 4
30 habitats.

31
32 61) NWN shall control vegetation within Maintenance Easement by mechanical means wherever
33 practicable. NWN shall not use chemical spray within 100 feet of water bodies, including
34 wetlands.

35
36 62) NWN shall notify OOE prior to any scheduled repair activity that involves excavation, tree
37 removal, or in-water work. The notification shall include site location, proposed activity, and
38 a description of vegetation to be affected, if any. The notification shall also describe
39 proposed measures to restore the repair site and limit impacts to fish and wildlife habitat, if
40 applicable. For emergency repairs necessary to alleviate stress on the pipe or investigate
41 potential damage discovered during inspections required by OPUC or USDOT regulations or
42 this site certificate, NWN may provide the notification as soon as practical following the
43 repair.

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Threatened and Endangered Species

- 1) NWN shall schedule construction within one mile of documented or newly discovered bald eagle nest sites to avoid the critical breeding and rearing period (January 1 to August 31) for this species.

Historic, Cultural and Archaeological Resources

- 1) Before beginning construction of the pipeline, NWN shall certify that all NWN and contract supervisory personnel with construction responsibility are trained in the identification of cultural resources. NWN shall make plans, subject matter and the schedule for this training available to OOE before commencement of the training program.
- 2) During construction of the pipeline, in the event any additional “archaeological sites” or “archaeological objects” are identified, NWN shall cease all ground-disturbing activities in the area until a qualified archeologist can evaluate the significance of the find. If the archeologist determines that the materials are significant, NWN shall make recommendations to the Council for mitigation in consultation with SHPO, the Office, and other appropriate parties. Mitigation measures shall include avoidance or data recovery. NWN shall not restart work in the affected area until it has demonstrated to the Office that it has complied with the archeological permit requirements administered by SHPO as set forth in OAR Chapter 736, Division 51 (on public land) or has obtained the landowner’s written permission to proceed (on private land.)
- 3) During construction of the pipeline, NWN shall route the pipeline as described in its application for site certificate and its responses to requests for additional information. Specifically, NWN shall route the pipeline as follows, unless NWN, in consultation with a qualified archaeologist, identifies another location which has less impact to these sites: in the vicinity of site S-1, within the existing 16-inch SMF pipeline corridor on the western boundary of the site; in the vicinity of site 35WN33, within the existing pipeline corridor on the west and south edges of the site; in the vicinity of site 35WN35, within the existing pipeline corridor, offset from the 16-inch SMF pipeline by 10 feet; in the vicinity of site ORWN1/35WN34, west of the existing pipeline corridor and by means of boring under the area; in the vicinity of site S-2, east of the eastern boundary of the site; and in the vicinity of site S-5, in fill and previously disturbed materials under the road within the Barlow Road right-of-way. NWN shall not disturb archaeological sites S-3 and S-4.
- 4) During construction of the pipeline, NWN shall avoid any disturbance within archaeological sites S-1, S-2, S-3, S-4, 35WN33 and ORWN1/35WN34. If such avoidance result in adverse impact to jurisdictional wetlands or habitat described in Exhibit P of the ASC, causes the use of additional land in the EFU zone outside public right of way, creates a conflict with other Council standards, or creates a condition adverse to human health and safety, NWN shall obtain approval from OOE, in consultation with SHPO, before causing any disturbance within any of these archaeological sites.

- 1 5) During construction of the pipeline, NWN shall retain a qualified archaeologist to monitor
2 construction activity in the vicinity of archaeological sites S-1, S-2, S-3, S-4, S-5, 35WN33,
3 35WN35, and ORWN1/35WN34 and all grading and excavation activities in the vicinity of
4 isolated finds I-1 through I-13 to ensure that archaeological resources in these locations are
5 not disturbed.
6
- 7 6) Before beginning construction, NWN shall conduct an archaeological survey of the
8 temporary laydown areas and shall submit a report of the survey to the Office of Energy. If
9 archaeological objects or archaeological sites are discovered in the temporary laydown areas,
10 NWN may not begin construction of that portion of the pipeline until NWN has submitted to
11 the Office a mitigation plan consistent with the other conditions of this site certificate. In
12 preparing the mitigation plan, NWN shall consult with SHPO, the Office, and other
13 appropriate parties.
14
- 15 7) On properties to which NWN has been denied access prior to issue of the site certificate,
16 NWN shall engage a qualified archeological inspector to look for and analyze artifacts, and
17 shall comply with state law regarding these resources, if found.
18

19 *Public Services Standard*
20

- 21 1) NWN shall obtain all required permits from the Oregon Department of Transportation for
22 construction in public road right-of-way and shall conform to the Standard Specifications for
23 Highway Construction, Oregon Department of Transportation, Section 00220 –
24 Accommodation for Public Traffic. Ambulances, fire trucks and police and, in the Dairy
25 Creek Valley area, private vehicles providing emergency transportation services, shall be
26 afforded immediate passage. NWN will assure that a company representative is present on
27 Dairy Creek Road during periods of complete closure Dairy Creek Road.
28
- 29 2) NWN shall perform any road work under permit provisions provided by the affected county
30 for work within the right-of-way along county roads. NWN shall develop and implement
31 traffic control planning measures as part of the county permitting process. NWN will have
32 overall responsibility for assuring that all contractors on the Project comply with these permit
33 conditions. NWN shall ensure contractor compliance through construction inspection
34 programs and construction management personnel.
35
- 36 3) NWN will provide a detailed traffic control plan for each phase of work, showing signs and
37 cones, certification and use of flaggers, and proposed methods of lane closures. NWN will
38 be responsible for safely accommodating public traffic lanes within the construction area.
39 NWN shall submit these plans to the ODOT District manager prior to construction along
40 state roads or to the county road department prior to construction along county roads.
41
- 42 4) NWN shall provide the county road department in each affected county with final
43 construction drawings prior to start of construction in that county. Project construction shall
44 be coordinated with the county's future paving and culvert replacement programs.
45

- 1 5) NWN shall coordinate with school districts along the construction corridor to manage any
2 potential school bus delays during project construction in months when school is in session.
3

4 *Waste Minimization Standard*

- 5 1) NWN shall transport construction waste materials to an appropriate recycling facility or to an
6 approved sanitary landfill for nonrecyclable goods. NWN shall collect scrap steel and
7 welding rod for transportation to a recycling facility. Geotextile and straw bales shall be
8 transported to an approved landfill.
9
- 10 2) Water used for pressure testing shall be disposed of in a manner consistent with a WPCF
11 permit issued by DEQ.
12
- 13 3) NWN shall minimize the use of water by recycling water for the hydrostatic testing and
14 directional drilling process. Bentonite used in the drilling process shall be recycled to the
15 extent practical.
16

17 **F. CONDITIONS RELATED TO PUBLIC SAFETY, OAR CHAPTER 345, DIV. 24**

18
19 Under ORS 469.401(2), EFSC must impose conditions in the site certificate for the protection of
20 public health and safety. Throughout the final order are conditions related to other decisional
21 criteria that are ultimately intended to protect public health and safety. The following conditions
22 protect public health and safety specifically with regard to EFSC standards for surface facilities
23 related to underground natural gas storage and natural gas pipelines.
24

- 25 1) NWN shall maintain a program to monitor the pipelines to ensure protection of public health
26 and safety, including but not be limited to:
27 a) pressure sensing devices positioned on the pipelines at Miller Station to relay information
28 to both Miller Station and the Portland gas control centers.
29 b) high and low pressure alarms monitored on a 24 hour basis to detect and locate areas
30 where pressure variations may indicate abnormal conditions, and
31 c) emergency response personnel on duty 24 hours a day, at Miller Station or in Portland,
32 trained to respond to situations that require immediate attention.
33
- 34 2) The following specifications are deemed commitments by NWN:
35 a) NWN shall specify pipe that meets the requirements for Class 3 locations as defined at 49
36 CFR 192.5 (March 15, 1999). NWN shall specify .375 inch wall thickness and minimum
37 52,000 lb. tensile strength in all sections of the pipeline.
38 b) NWN shall perform 100% X-ray testing of all welds on the 24 inch pipeline.
39 c) NWN shall maintain at least 24 inches of clearance between the pipeline and the existing
40 16 inch line. Minimum separation requirements at 49 CFR 192 shall apply otherwise.
41 [amendment 1]
42 d) NWN shall maintain a minimum of 48 inches of pipe cover in all locations, and 60 inches
43 in timberland or cultivated land.
44 e) NWN shall hydrostatically test the pipeline at a minimum of 1080 psig in all sections.
45 f) NWN shall use at least a 12 mil thick fusion bonded epoxy (FBE) coating on the pipeline,
46 except that pipe used for road crossings shall have a 25 mil FBE coating.

- 1
2 3) Program Development Requirements: Prior to commencement of operations on the 24-inch
3 pipeline, NWN shall develop and obtain OOE approval for the following programs:
4 a) Training of personnel responsible for patrolling the pipeline, with emphasis on early
5 recognition of conditions indicating increased landslide hazard.
6 b) Accelerated pipeline surveillance program with provisions for increased surveillance in
7 extreme weather years. The program shall include recommendations by a geotechnical
8 engineer for locations that warrant accelerated surveillance in excess of the periodic
9 patrolling requirements for the pipeline in general.
10 c) Training of personnel responsible for drainage control, with emphasis on identifying
11 areas where pipeline installation could increase the drainage hazard and on implementing
12 effective solutions.
13 d) Continuing investigation of internal inspection devices (IID's) or "smart pigs," or other
14 appropriate technologies with the capability to detect internal flaws, corrosion, and other
15 pipeline defects, and development of criteria for determining the utilization of IID's, or
16 any other appropriate technologies for detecting flaws, corrosion and other indications
17 that the likelihood of pipeline failure may have increased. Such criteria shall, at a
18 minimum, be consistent with federal and OPUC regulations.
19 e) Development of criteria to identify the level at which NWN will excavate pipe sections
20 for stress relief, based on strain gauge readings.
21
22 4) NWN shall design and construct the pipeline substantially in accordance with the
23 representations in ASC Appendix B-1 and Exhibit BB and NWN's July 2001 response to
24 OOE's May 2001 Request for Additional Information (questions on exhibit BB). In the
25 event of a conflict between these commitments and other requirements, 49 CFR Part 192
26 shall prevail.
27

28 **G. PERMITTING REQUIREMENTS OF AGENCIES OTHER THAN EFSC**

29 The Council finds that the NWN Application complies with the requirements for the following
30 permits, subject to conditions recommended in consultation with the affected agencies:
31

- 32 1) Removal/Fill permits from the Division of State Lands, subject to the conditions listed in
33 section IV.D.1 of the Proposed Order (Attachment C of the final order).
34
35 2) Limited Water Licenses from the Water Resources Department (WRD), subject to the
36 conditions listed in section IV.D.2 of the Proposed Order (Attachment C of the final order).
37
38 3) Water Pollution Control Facilities (WPCF) permits from Department of Environmental
39 Quality (DEQ), subject to the conditions listed in section IV.D.3 of the Proposed Order
40 (Attachment C of the final order).
41
42 4) Amendment #2 to the Site Certificate authorizes NWN to divert up to 2 million gallons of
43 water from the Willamette River for construction and hydrostatic testing from an additional
44 site at the marina near where Boone's Ferry Road reaches the south bank of the Willamette
45 River, shown on the figure in the Limited License application submitted to WRD on
46 September 11, 2003 (Exhibit 2 of the application for Amendment 2). WRD shall issue the

1 Limited License with conditions substantially in conformance with those at section IV.C.1 of
2 the Order Approving Amendment 2 and valid for one year from the effective date of the final
3 authorization required for the use to occur.² [amendment 2]
4

- 5) NWN may discharge up to 1.5 million gallons of hydrostatic testing water within a straw bale
6 enclosure at a site on agricultural property on the east bank of the Pudding River within the
7 200 foot corridor and located at 45° 14' 57"N, 122° 44'43"W. DEQ shall issue the special
8 WPCF permit substantially as described in the October 7, 2003 letter from Neil Mullane,
9 DEQ to Michael Hayward, NWN, valid until November 30, 2003. NWN shall station
10 individuals at the discharge location to ensure that the rate of discharge does not result in
11 erosion or scour that would result in an excessive increase in turbidity. [amendment 2]
12

13 **SEVERABILITY AND CONSTRUCTION.**

14 If any provision of this Site Certificate is declared by a court to be illegal or in conflict with any
15 law, the validity of the remaining terms and conditions shall not be affected, and the rights and
16 obligations of the parties shall be construed and enforced as if the Site Certificate did not contain
17 the particular provision held to be invalid. In the event of a conflict between the provisions
18 contained in the Site Certificate and the Council's Order, the provisions contained in this Site
19 Certificate shall control.
20

21 **GOVERNING LAW AND FORUM**

- 22 1) This site certificate shall be governed by the laws of the State of Oregon.
23
24 2) Any litigation or arbitration arising out of this agreement shall be conducted in an appropriate
25 forum in Oregon.
26

27 **IN WITNESS WHEREOF**, this Amended Site Certificate has been executed by the State of
28 Oregon, acting by and through its Energy Facility Siting Council, and Northwest Natural.
29

30 ENERGY FACILITY SITING COUNCIL
31

32
33 By: _____ Date: _____, 2003
34 Dr. Roslyn Elms-Sutherland, Chair
35

36 NORTHWEST NATURAL
37

38
39 By: _____ Date: _____, 2003

² The requirement to notify ODFW 30 days prior to the diversion was fulfilled under existing Limited License LL491 because the ODFW district biologist was informed of the water diversion and has stated that the measures to protect fish species are the same regardless of which diversion point is used