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**THIRD 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
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APRIL 23, 2004

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

36 **I. INTRODUCTION**

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

41 The findings of fact, reasoning and conclusions of law underlying the terms and conditions of
42 this Site Certificate are set forth in:

- 43 (1) the Council's Final Order in the Matter of the Application for a Site Certificate for the South
44 Mist Pipeline Extension, which the Council granted on March 13, 2003;
45 (2) the Council’s Final Order Approving Amendment #1, which the Council issued on August
46 28, 2003;
47 (3) the Council’s Final Order Approving Amendment #2, issued on December 5, 2003; and
48 (4) the Council’s Final Order Approving Amendment #3, issued on April 23, 2004.

49 By this reference, the Final Orders listed above are incorporated herein. In interpreting this Site
50 Certificate, any ambiguity shall be clarified by reference to, and in the following priority: (1)
51 this Site certificate; (2) the Final Orders Approving the Site Certificate and Amendments 1, 2 and
52 3; and (3) the record of the proceedings that led to the Final Order in the Matter of the
53 Application for Site Certificate.

54 The terms used in this Site Certificate shall have the same meaning set forth in ORS 469.300 and
55 Oregon Administrative Rules (OAR) 345-001-0010, except where otherwise stated or where the
56 context clearly indicates otherwise. The term “corridor” means the 200-foot wide corridor that
57 the Council approved as the site for the SMPE, plus workspaces and access routes approved by
58 the Council under Amendments 1 and 3.

59 **II. SITE CERTIFICATION**

- 60 1. To the extent authorized by State law and subject to the conditions set forth herein, the
61 State approves and authorizes the certificate holder to construct, operate and retire a 24-
62 inch diameter natural gas transmission pipeline, approximately 62 miles in length, within
63 a corridor described in Section C of this Site Certificate, between the Bacona Station in
64 Washington County and the Molalla Gate Station near Molalla Oregon. ORS 469.401(1).
65
66 2. This Site Certificate shall be effective (1) until it is terminated pursuant to OAR
67 345-027-0110 or the rules in effect on the date that termination is sought, or (2) until the

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 Oregon Department of Energy (“ODOE” or
41 “Department”) to inspect, or request another state agency or local government to inspect,
42 the site at any time in order to assure that the SMPE is constructed and operated
43 consistently with the terms and conditions of this Site Certificate. ORS 469.430.

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, those described in Exhibit 3 and shown on Exhibits 4 and 5 of
42 NWN's June 5, 2003 request for amendment #1, and those described or shown in Exhibits 2, 3
43 and 4 of NWN's February 19, 2004 request for amendment #3. In the event that the use of other
44 areas is necessary in connection with the construction of the proposed facility, NWN will (to the

1 extent such uses are within the Council’s jurisdiction) address the use of those areas through
2 additional amendment to the site certificate. [amendments 1,3]

3
4 The SMPE does not include any “related or supporting facilities”, as that term is defined at OAR
5 345-001-0010.

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

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

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

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

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

1 southeasterly direction and then turns southerly just west of Highway 219, which it parallels until
2 the first crossing of the Tualatin River.

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

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

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

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

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

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

1 Airport. The Aurora Airport Alternate and the Preferred Corridor join at the intersection with
2 Airport Road.

3
4 The Preferred Corridor then turns south onto Airport Road, proceeds a short distance to the
5 south, turns east and traverses private property, crosses under the Pudding River, and emerges in
6 the vicinity of Anderson Road. It follows Anderson Road for a short distance, turns south about
7 600 feet before Barlow Road, and crosses Highway 99E. The corridor intersects Barlow Road,
8 turns south, and follows Barlow road south until a point just before Zimmerman Road.

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

17 18 **IV. Site Certificate Conditions**

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

28 29 **A. MANDATORY CONDITIONS FROM OAR CHAPTER 345, DIVISION 27**

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

1 the final resolution of appeals and shall be completed not later than three years following the
2 commencement of construction. In no event shall construction commence after July 1, 2005.

- 3
- 4 4) No construction, including clearing of a right of way, except for the initial survey, may
5 commence on any part of the facility until the certificate holder has adequate control, or has
6 the statutory authority to gain control, of the lands on which clearing or construction will
7 occur.
8
- 9 5) NWN shall prevent any condition over which NWN has control from developing on the site
10 that would preclude restoration of the site to a useful condition.
11
- 12 6) NWN shall restore vegetation to the extent practicable and shall landscape portions of the
13 area disturbed by construction in a manner compatible with its surroundings and/or proposed
14 future use. Upon completion of construction, NWN shall dispose of all temporary structures
15 not required for future use and all refuse and flammable materials or combustible material
16 resulting from the clearing of land or from construction of the facility, as well as timber and
17 brush that is not used for habitat mitigation in accordance with conditions related to the
18 Council's Fish and Wildlife Habitat standard.
19
- 20 7) The construction easement shall be limited to 80 feet, except where a narrower or wider
21 construction corridor is required by conditions related to individual Council standards. NWN
22 may deviate from this maximum construction easement width if such deviations are
23 authorized by ODOE. To obtain authorization from ODOE for a deviation in easement
24 width, NWN must provide ODOE with the following information: 1) the location of the
25 requested deviation; 2) the reason(s) for the deviation and any documentation necessary to
26 demonstrate such reasons; 3) the proposed easement width; and 4) measures that NWN will
27 implement to mitigate additional impacts, if any, on resources protected by Council
28 standards.
29

30 In determining whether to approve the requested deviation, ODOE shall provide a landowner
31 with the opportunity to comment on the requested easement and on mitigation and minimization
32 measures. ODOE shall approve the requested deviation if it determines:

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

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

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

- 31 1) NWN shall notify OOE, the State Building Codes Division and the Department of Geology
32 and Mineral Industries promptly if site investigations or trenching reveal that subsurface
33 conditions differ significantly from those described in the Application for Site Certificate.
34 The Council may, at such time, require the certificate holder to propose additional mitigating
35 actions in consultation with the Department of Geology and Mineral Industries and the
36 Building Codes Division.
37
- 38 2) NWN shall notify OOE, the State Building Codes Division and the Department of Geology
39 and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic
40 dikes are found at or in the vicinity of the site.
41
- 42 3) NWN shall submit to ODOE copies of all incident reports involving the certified pipeline
43 required under 49 CFR §192.709.
44

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

- 2 1) NWN shall establish, in consultation with affected state agencies and local governments,
3 monitoring programs as required by the Site Certificate for impact on resources protected by
4 the standards of OAR Chapter 345, Divisions 22 and 24 and to ensure compliance with the
5 Site Certificate. The programs shall be subject to the review and approval of the Council.
6
7 2) NWN shall establish monitoring programs as required by permitting agencies and local
8 governments, as required by the Site Certificate.
9
10 3) If NWN becomes aware of a significant environmental change or impact attributable to the
11 facility, NWN shall submit to ODOE as soon as possible a written report identifying the issue
12 and assessing the impact on the facility and any affected Site Certificate conditions.
13

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

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

1 will not cut any of the coniferous trees outside of the power transmission right-of-way.
2 [amendment 1]

- 3
- 4 8) There will be no clearing, grading, or ground disturbance on the workspaces and access
5 routes other than the impact of driving vehicles and storing equipment and material except to
6 remove vegetation for fire control. At the Chicken Creek bore laydown area in PGE's right-
7 of-way, brush may be cut back to facilitate side-boom access, but no grading will take place.
8 Following construction, the shrubs will be allowed to grow back. This condition is not
9 intended to preclude post-construction site restoration activities. [amendment 1]
- 10
- 11 9) NWN shall use existing farm roads for access on these properties: Shirazi, Wetter, Davis,
12 Leach, Oregon Parks Department, Sweningson, Downey, Klupenger, Anderson, Lais and
13 DeMartini [amendment 1].
- 14
- 15 10) If workspace is needed to accommodate hard surface replacement, an HDD bore, or to enable
16 special construction techniques due to unusual site specific constraints, use of the workspace
17 is contingent on NWN performing the hard surface replacement, bore or other special
18 technique. [amendment 1].
- 19
- 20 11) Notwithstanding OAR 345-027-0020(1) Condition 1, the permanent maintenance easement
21 may deviate outside of the Leisy road right-of-way to accommodate the transition of the
22 SMPE from the Leisy Road alignment to the Padgett Road alignment as described in NWN
23 Application for Amendment No. 3, Exhibit 2, Panel 12. [amendment 3]

24

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

26 *Organizational Expertise Standard:*

- 27 1) NWN shall contractually all require contractors and subcontractors involved in the
28 construction and operation of the Project to comply with all applicable laws and regulations
29 and with the terms and conditions of the site certificate. Such contractual provision shall not
30 operate to relieve the certificate holder of responsibility under the site certificate.
- 31
- 32 2) NWN shall obtain all necessary state and local permits or approvals required for the
33 construction, operation and retirement of the Project.

34

35 *Structural Standard:*

- 36 1) NWN shall assess seismically induced damage from slope movement following any
37 earthquake that generates peak ground accelerations in excess of 0.1g along the corridor.
- 38
- 39 2) NWN shall design and construct the pipeline substantially in accordance with the
40 recommendations of Appendix H-1 of the Application, Section 6.1: "Hazard Mitigation."
- 41
- 42 3) During construction of the pipeline, NWN shall provide that construction is observed by a
43 qualified geo-professional to ensure that the recommendations contained in Appendix H-1 of
44 the Application are implemented properly and that any unforeseen field conditions are
45 reported to NWN. If changes are encountered in the field, NWN shall ensure that the
46 pipeline design is modified to provide for safe installation and operation of the pipeline.

1
2 4) In areas of critical geotechnical importance, trenching will not proceed without confirmation
3 that ODOE and DOGAMI have been notified at least one week in advance. This notice is
4 required to afford ODOE and DOGAMI the opportunity to send qualified monitoring
5 personnel, which monitoring shall be performed at NWN expense. If NWN provides timely
6 notice, the failure of ODOE or DOGAMI to send qualified personnel shall not prevent NWN
7 from performing the specified work. The critical areas are defined as the corridor north of
8 the point where Dairy Creek Road terminates, and the corridor between Brookman and
9 Tooze Roads.

10
11 5) On properties to which NWN has been denied access prior to issue of this site certificate, a
12 registered geologist or geotechnical engineer shall be present during trenching along the
13 ridge north of where Dairy Creek Road terminates, and also on private property between
14 Brookman Road and the intersection with Ladd Hill Road, and shall provide to ODOE a
15 written record of observations prior to pipeline operation.

16
17 6) NWN shall follow a schedule of right-of-way monitoring for landslide hazard, based on the
18 following criteria:

- 19
- 20 - immediately after 4 or more inches of rain within 48 hours
- 21 - immediately after 6 or more inches of rain within 7 days
- 22 - immediately after a rain on snow event that might have a similar effect as either of the
23 above precipitation events.

24
25 Rainfall shall be measured using METARS and RAWS, including Miller Station, as
26 described by URS.

27
28 7) In addition to strain gauges installed on the pipeline, NWN shall install vertical and
29 horizontal inclinometers in appropriate locations to monitor for ground movement in the
30 vicinity of the Sherman Mill slide. The installation shall be prior to or concurrent with
31 pipeline construction. NWN shall monitor these instruments and report findings to ODOE
32 yearly after installation. If the instruments indicate ground movement that is different from
33 what was predicted in the ASC, NWN shall promptly report to the Council and describe any
34 corrective actions necessary to alleviate danger to the pipeline.
35

36 *Soil Protection Standard*

37 1) NWN shall use erosion prevention techniques and sediment control measures as described in
38 the Erosion Prevention and Sediment Control Manual (December 2000) jointly developed by
39 the Clean Water Agency, Washington County, Clackamas County, and the city of West Linn,
40 or its successor. Use of these measures shall not be limited to Washington County.

41
42 2) OOE will hire an independent, qualified agricultural inspector to facilitate, verify, document
43 and enforce the implementation of the AIMP. This agricultural inspector will work with
44 NWN, who will continue to have primary responsibility to implement the measures described
45 in the AIMP, in accordance with its terms. NWN will reimburse ODOE for the expense of
46 the independent agricultural inspector.

- 1
2 3) NWN shall implement the Agricultural Impact Mitigation Plan (AIMP) (October 2001) and
3 all steps contained therein, except that the AIMP shall be modified (1) to require segregation
4 of topsoil to the "A" horizon, as opposed to the 12 inches described in the AIMP, and (2) by
5 the inclusion of an alternate method of topsoil segregation described in Addendum 1 to the
6 AIMP. As a supplement to the AIMP, NWN shall implement the Post Construction Crop
7 Monitoring Plan (PCCMP) (November 2002) and all steps contained therein. The AIMP,
8 including revisions adopted by the Council, is included as Attachment D to the Final Order.
9
10 4) NWN shall design and construct the pipeline substantially in accordance with the
11 representations made in Exhibit I of the Application for Site Certificate, March 2001.
12 Mitigation steps that are described in Exhibit I and are not listed in the AIMP are nonetheless
13 considered binding commitments by NWN and shall apply.
14
15 5) Site specific mitigation measures shall be tailored to the soil type, as listed in Tables I-2, I-3
16 and I-4 of the ASC.
17
18 6) NWN shall certify that all NWN and contract supervisory personnel with construction
19 responsibility are trained in the specific mitigation requirements described in Exhibit I, the
20 Agricultural Impact Mitigation Plan, and the Council's final order. Plans, subject matter, and
21 the schedule for this training shall be made available to ODOE and ODA prior to start of
22 construction.
23

24 *Land Use Standard*

25 General Land Use Conditions

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

1 of way. In addition, the width of the construction easement for this portion of the facility
2 may extend beyond the edge of existing public road or highway right-of-way by up to 50
3 feet.

- 4
- 5 4) Permanent Easement: Local Roads in an EFU Zone. Where the corridor includes existing
6 public road or highway right-of-way (whether or not that right-of-way is improved) within an
7 EFU district, and the road or highway is classified by the county or by the state as a local
8 road, the maintenance/operation easement for that portion of the facility shall be located so
9 that the edge of the easement begins at the centerline of the right of way. In addition, the
10 width of the maintenance/operation easement for this portion of the facility is limited to no
11 more than 40 feet, measured from the centerline of the road right-of-way.
- 12
- 13 5) Construction Easement: Local Roads in an EFU Zone. Where the corridor includes existing
14 public road or highway right-of-way (whether or not that right-of-way is improved) within an
15 EFU district, and the road or highway is classified by the county or by the state as a local
16 road, the construction easement for that portion of the facility shall be located so that the
17 edge of the easement begins at the centerline of the right of way. In addition, the width of
18 the construction easement for this portion of the facility is limited to no more than 80 feet,
19 measured from the centerline of the road right-of-way.
- 20
- 21 6) General Width Restrictions (All Zones). Unless otherwise allowed by these conditions, the
22 permanent easements for the facility are limited to no more than 40 feet in width, and the
23 temporary/construction easements are limited to no more than 80 feet in width. See also,
24 Mandatory Conditions 7 and 8. In the event of any conflict between this condition,
25 conditions 2-5 above, or mandatory conditions 7 or 8, the following priority shall control: (a)
26 Mandatory Condition 7 shall take first priority in the event of any conflict involving a
27 temporary/construction easement; (b) General Land Use Conditions 2-5 shall take next
28 priority; and (c) the general widths of 40 and 80 feet specified in this condition and in
29 mandatory conditions 7 and 8 shall control to the extent that (a) and/or (b) do not.
- 30
- 31 7) Conflict with Existing Utility Lines. Notwithstanding conditions 2, 4 and 6, above, where
32 there are existing utility lines in that portion of the public road or highway right-of-way
33 where the facility would otherwise be located, the maintenance/operation easements for the
34 facility may extend outside of the existing road or highway right-of-way by up to 20 feet,
35 regardless of the classification of the road and regardless of the resulting overall width of the
36 easement.
- 37
- 38 8) Conflict with Safety Regulations. Notwithstanding conditions 2, 4 and 6, above, the
39 maintenance/operation easements for the facility may extend further outside of existing road
40 or highway right-of-way (than otherwise allowed by conditions 1-7, above) where necessary
41 to comply with safety regulations of Oregon Occupational Safety and Health Administration
42 or the Oregon Public Utilities Commission.
- 43
- 44 9) Split Zone Corridor. Where the corridor includes lands on both sides of a public road, and
45 those lands are zoned EFU only on one side of the road, NWN shall locate the facility on the

1 side of the road that is not zoned EFU except where NWN demonstrates that it would be
2 necessary to remove or displace a building to stay on the non-EFU side. This condition may
3 be relaxed if using the non-EFU side would unavoidably result in the pipeline being less than
4 40 feet from a building used for human occupancy.
5

6 10) Avoidance of Category 1 or Category 2 Habitat. If the construction or permanent easements
7 in or adjacent to road right-of-way would affect Category 1 or Category 2 habitat as
8 described in section IV.7 of the Proposed Order (Attachment C of the Council's final order),
9 the construction or permanent easement may be sited on land in the EFU zone that is not
10 within the existing road right-of-way, to the extent necessary to avoid Category 1 or 2
11 habitat. In such cases the easement shall be located as close to the road right-of-way as
12 possible. This permission shall not apply if the habitat will be avoided through HDD or other
13 boring techniques. EFU land that is not in the public road right-of-way shall not be used to
14 avoid habitat of category 3 or lower.
15

16 11) Where the corridor for the facility includes the right-of-way of the existing South Mist
17 Feeder line, the permanent easement for the facility shall follow the existing SMF line and
18 the width of the right-of-way for the two pipelines shall not exceed 40 feet.
19

20 12) Easements allowed under Amendment #1. (a) Notwithstanding conditions 2 and 6, the
21 permanent maintenance easements on the Nordstrom and Schmidt Limited Partnership
22 properties (NWN Application for Amendment 1 Exhibit 4 panel 40) may be 60 feet in total
23 width including 30 feet of private easement, where the easement includes the drip lines of an
24 ash tree (Nordstrom property) and an oak tree (Schmidt property) and a permanent access
25 easement is allowed access the Clean Water Services property on panel 14. (b)
26 Notwithstanding conditions 3,5 and 6: (1) if a landowner requests topsoil storage on the
27 landowner's property in a location outside the 80-foot easement width, NW Natural may
28 acquire and utilize a temporary easement covering such other location. The selected location
29 may not alter the contour or drainage in any flood hazard zone and may not affect any
30 wetland as that term is defined in the Oregon State Land Division's wetland delineation
31 criteria. All topsoil so stored shall be returned to its original location in or along the pipeline
32 trench.; and (2) the temporary access and construction laydown easements described and
33 shown in Exhibits 3, 4 and 5 to Application for Amendment 1 to the site certificate are
34 authorized. [amendment 1]
35

36 13) Easements allowed under Amendment #3. (a) Notwithstanding General Land Use
37 Conditions 2 and 6, the permanent maintenance easement on the Tonges and Simpson
38 property may be shifted to the west to abut the proposed expanded Oregon Department of
39 Transportation right-of-way for Highway 219 (NWN Application for Amendment No. 3,
40 Exhibit 2, Panel 16); a permanent easement is allowed as modified on the Waibel and Evans
41 properties (NWN Application for Amendment No. 3, Exhibit 2, Panel 13); and a permanent
42 access easement is allowed across the Lakeside and Davis properties (NWN Application for
43 Amendment No. 3, Exhibit 2, Panel 14); (b) Notwithstanding General Land Use Conditions
44 3, 5 and 6, the temporary access and construction laydown easements described and shown in

1 Exhibits 2, 3, and 4 to Application for Amendment No. 3 to the site certificate area are
2 authorized.[amendment 3]

3
4 Wash. Co. Floodplain and Drainage Hazard Regulations (WCC § 421), Erosion Control
5 Regulations (WCC § 426), and Grading and Drainage Regulations (WCC § 410):
6

- 7 1) NWN shall obtain from the Washington County Operations Division, and its equivalent in
8 Clackamas and Marion counties, all required utility permits to allow construction of the
9 pipeline within the County road right-of-way. A copy of the permit shall be submitted to the
10 Land Use planner for that county.
- 11
12 2) NWN shall provide the Washington County Land Development Division Project Planner,
13 and the equivalent in Clackamas and Marion counties, with a copy of any permits from the
14 Oregon Division of State Lands and/or the U.S. Army Corps of Engineers for work that will
15 be done in flood plain areas within those counties.
- 16
17 3) Prior to construction, NWN shall provide Washington County with the detailed grading plan
18 and obtain a grading permit from Washington County pursuant to WCC § 410.
- 19
20 4) NWN shall obtain equivalent utility and grading and drainage permits in Clackamas and
21 Marion Counties as applicable.
- 22
23 5) Prior to construction, NWN shall provide the Washington County Land Use Department with
24 the floodplain delineations meeting the requirements of WCC 421-1.2 A, B, and C.
- 25
26 6) Prior to construction, NWN shall submit detailed topographic information meeting the
27 requirements of WC 421-3, prepared by civil engineer registered in Oregon.
- 28
29 7) NWN shall implement the mitigation measures in the “Flood Hazard Impact Mitigation Plan”
30 submitted as Appendix K-10 of the ASC.
- 31
32 8) NWN shall provide a statement by a registered civil engineer affirming that the pipeline
33 conforms with the standards of WCC § 421-10.
- 34
35 9) NWN shall perform any maintenance on the maintenance easement outside public right of
36 way by means of hand implements (under WCC 421-14 lawn mowers are considered hand
37 implements).
- 38
39 10) Excess soils generated by trench excavation and backfill shall be hauled off of the pipeline
40 alignment and disposed of in an approved fill site area. Surface conditions shall be restored
41 to pre-construction slopes and grades and disturbed areas shall be revegetated.
- 42
43 11) If the pipeline crosses a stream or drainage hazard area, it shall be installed six feet below the
44 bottom of the natural channel. The channel shall be restored to its original conditions.
- 45

- 1 12) NWN shall allow no above ground structures that will catch debris or impede floodwater
2 flow. Protective fencing required around above ground facilities shall be designed not to
3 impede floodwater flow.
4
- 5 13) The existing grades and dimensions of the floodway shall not be changed. Trench
6 excavations that have disturbed vegetation shall be revegetated.
7
- 8 14) NWN shall not dump fill material in a flood area without a permit from Washington County.
9
- 10 15) NWN shall equalize cut and fill and shall certify at the completion of construction of the
11 pipeline that no net fill has occurred in flood hazard areas, except for post-construction
12 "crowning" to allow for soil settlement.
13
- 14 16) NWN shall observe Washington County's preference for enhancement of riparian habitats
15 through planting or other such improvements. WCC Section 421-4.6B recommends the
16 planting of "at least 5 plants per 100 feet of bank area."
17
- 18 17) NWN shall implement the Erosion and Sediment Control Plan submitted as ASC Exhibit K-
19 11. Note – the Washington County 1991 Manual is replaced by the CWA Erosion
20 Prevention and Sediment Control Manual dated 12/2000
21
- 22 18) Prior to construction, NWN shall provide ODOE with documentation of Washington County
23 review of the final Erosion Control Plan.
24
- 25 Other Conditions Requested by Washington County
- 26 19) For any section of the pipe placed under the road, NWN shall restore the road to pre-
27 construction condition or better, and to a standard designed for normal traffic loading for a 20
28 year life.
29
- 30 20) NWN shall consult with the appropriate County's operations department regarding load
31 capacity for any bridges utilized during construction.
32
- 33 21) NWN shall coordinate any road closures through the affected County.
34
- 35 22) NWN shall not deposit spoils from the Tualatin Valley highway bore within the M-2 district
36 in Hillsboro.
37
- 38 23) Construction hours for the project are 7:00 AM until 7:00 PM daily except for Sundays. If
39 work is proposed after these hours or on Sunday, NWN must obtain a variance from
40 Washington County noise standards.
41
- 42 24) NWN shall contact the Oregon Heritage Tree program during planning and construction to
43 protect the tree resource located on highway 219 south of Hillsboro.
44

1 25) NWN shall obtain access permits from the County for private road intersections with
2 County/public roads. [amendment 3]
3

4 Agricultural Mitigation Conditions under ORS 215.275(5)
5

- 6 1) Crops prohibited over the pipeline shall be limited to mature fruit and nut trees, and ball and
7 burlap nursery crops and other crops that require any mechanical digging or hand digging
8 deeper than 3 feet. Additionally, Christmas trees that are more than 10 years old, fence posts
9 and other support posts, and other large trees shall be prohibited. Such crops and posts shall
10 not be allowed within 5 feet of the pipe centerline, for a total width of 10 feet. Farmers may
11 install fencing or cross the pipeline above or below the pipe for water service and drainage
12 with prior notification to and written approval by NWN, which approval shall not be
13 unreasonably withheld. Permanent surface structures and permanent reforestation activities
14 are prohibited over the entire 40-foot permanent easement area.
15
- 16 2) NWN shall not preclude use of propane blasters for gopher control on private property near
17 the easement. The company shall analyze and negotiate the use of such equipment in close
18 proximity to the pipeline.
19

20 Site Specific Land Use Conditions
21

- 22 1) In the corridor along Brookman Road, NWN shall locate the pipeline either within road right
23 of way or in exception lands to the north of the road, unless
24 a) NWN submits evidence to the Council that it has attempted to obtain the necessary
25 wetlands permits from DSL and the US Army Corps of Engineers and cannot obtain
26 one; or
27 b) NWN obtains concurrence from ODOE that the category 3 habitat cannot feasibly be
28 mitigated consistent with the ODFW Habitat Mitigation Goals as required by OAR
29 345-022-0060.
30
- 31 2) Along Dryland, Zimmerman and Heinz Roads, the SMPE shall be located within the
32 Preferred Corridor.
33

34 Special Conditions for Temporary Laydown Area
35

- 36 1) Prior to the temporary, construction-related use of any laydown area shown on Appendix K-2
37 of the ASC, as supplemented in July 2001, that is outside the 200-foot pipeline corridor (the
38 temporary laydown areas), NWN shall provide the Department of Energy with a map, aerial
39 photograph or other depiction of the proposed temporary laydown area, together with a
40 description of the temporary laydown area, including the zoning, physical conditions,
41 existing uses, and any fieldwork studies performed at the temporary laydown area.
42
- 43 2) Use of the temporary laydown areas shall conclude within one month of the date construction
44 is complete. Mitigation for impacts to habitat and farm land shall be completed as soon as
45 reasonably possible after the temporary use is concluded.

- 1
2 3) The temporary laydown area shall not (1) be located within an area identified as Category 1
3 or 2 habitat; or (2) contain threatened or endangered species identified in Exhibit Q. It is
4 expressly understood that the approval is only for temporary uses and no permanent uses will
5 be allowed in these areas.
6
7 4) NWN shall restore, as nearly as possible, to its former condition any agricultural land and
8 associated improvements that are damaged or otherwise disturbed by the siting, maintenance,
9 repair or reconstruction of the facility. Mitigation conditions applicable under the Council's
10 Soils standard, OAR 345-022-0022, shall apply to any temporary laydown area.
11
12 5) Conditions (1) through (4) above shall apply to the temporary easements described in
13 Exhibits 3, 4, and 5 of Application for Amendment 1. [amendment 1]
14
15 6) Conditions (1) through (4) above shall apply to the temporary easements described in
16 Exhibits 2, 3 and 4 of Application for Amendment No. 3. [amendment 3]
17

18 *Protected Areas Standard*

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

23 *Retirement and Financial Assurance Standard*

- 24 1) Prior to beginning construction, the certificate holder shall submit to the State of Oregon
25 through the Council a bond or letter of credit in the amount of \$700,000 (in 2001 dollars)
26 naming the State of Oregon, acting by and through the Council, as beneficiary or payee.
27 a) The calculation of 2001 dollars shall be made using the U.S. Gross Domestic Product
28 Implicit Price Deflator, as published by the U. S. Department of Commerce, Bureau of
29 Economic Analysis, or any successor agency (the "Index"). The amount of the bond or
30 letter of credit account shall increase annually by the percentage increase in the Index and
31 shall be pro-rated within the year to the date of retirement. If, at any time, the Index is no
32 longer published, the Council shall select a comparable calculation of 2001 dollars. The
33 form of the bond or letter of credit and identity of the issuer shall be subject to approval
34 by the Council.
35 b) The bond or letter of credit shall not be subject to revocation or reduction prior to the
36 certificate holder's satisfaction of Condition (2) below.
37
38 2) Upon completion of construction, NWN may reduce the amount of the bond or letter of
39 credit to \$86,000 (in 2001 dollars) naming the State of Oregon, acting by and through the
40 Council, as beneficiary or payee (the "Retirement Fund"). The calculation of 2001 dollars
41 shall be made using the Index. The form of the Retirement Fund and identity of the issuer of
42 the bond or letter of credit shall be subject to approval by the Council. The Retirement Fund
43 shall not be subject to revocation or reduction prior to retirement of the energy facility.
44

- 1 3) The certificate holder shall describe the status of the Retirement Fund in the annual report
2 submitted to the Council, pursuant to OAR 345-026-0080.
3
- 4 4) If the project is halted prior to completion, NWN shall restore any right of way that has been
5 disturbed. NWN shall be responsible for backfilling of any open ditch, revegetation and
6 restoration costs and any damages to rights of way as specified in easements.
7
- 8 5) Prior to termination of the Site Certificate, NWN shall retire the site sufficiently to restore it
9 to a useful condition. Site restoration shall include, but not be limited to, steps to:
10 (a) Remove any hazardous material stored in buildings or located in process equipment
11 and dispose of them following applicable state hazardous materials statutes and rules,
12 (b) Remove above ground portions of all pipelines, and cut and cap the remaining portion
13 in five mile increments and at each end. NWN shall purge the pipeline to ensure that
14 all natural gas is removed.
15 (c) If necessary, revegetate the area, including pipeline right of ways, to prevent erosion
16 and encourage habitat development,
17 (b) Inspect all pipelines and remove any hazardous materials found, and dispose of
18 hazardous materials generated from cleaning the pipelines in accordance with
19 applicable state hazardous materials statutes and rules.
20
- 21 6) If the Council finds that NWN has permanently ceased construction or operation of the
22 SMPE without retiring the SMPE according to a final retirement plan approved by the
23 Council as described in OAR 345-027-0110, the Council shall notify NWN and request that
24 NWN submit a proposed final retirement plan to the Department within a reasonable amount
25 of time, not to exceed 90 days. If NWN does not submit a proposed final retirement plan by
26 the specified date, the Council may direct the Department to prepare a proposed final
27 retirement plan for the Council's approval. Upon the Council's approval of the final
28 retirement plan, the Council may draw on the bond or letter of credit described in condition
29 (1) of this section to restore the site to a useful, non-hazardous condition according to the
30 final retirement plan, in addition to any penalties the Council may impose under OAR
31 Chapter 345 Division 29. If the amount of the bond or letter of credit is insufficient to pay
32 the actual cost of retirement, the certificate holder shall pay any additional cost necessary to
33 restore the site to a useful, non-hazardous condition. After completion of site restoration, the
34 Council shall issue an order to terminate the site certificate if the Council finds that the
35 SMPE has been retired according to the approved retirement plan.
36

37 *Fish and Wildlife Habitat Standard*

38 General

- 39 1) NWN shall take appropriate and reasonable measures to first avoid, then reduce, then restore,
40 and then compensate for impacts to fish and wildlife habitat that result from construction and
41 operation of the proposed project consistent with that habitat category.
42
- 43 2) NWN shall reimburse the Department of Energy for costs associated with on-site
44 construction inspection monitoring by either ODOE or ODFW.
45

- 1 3) NWN shall construct the pipeline within the construction corridor along the preferred
2 alignment (the "preferred alignment construction corridor") that was the basis for
3 Supplemental Table P-4 (May 15, 2002), Supplemental Table P-5 (March 5, 2002) and the
4 memo from Meehan, OOE, to Hayward, NWN, dated May 22, 2002, and the Hayward reply
5 to Meehan dated June 12, 2002. NWN may deviate from this construction corridor if there is
6 a conflict with other conditions of the site certificate, requirements of other state, local or
7 federal agencies, public health and safety, or if new information is discovered during
8 construction that was not known prior to issuance of the site certificate.
9
- 10 4) Where NWN must deviate from the preferred alignment construction corridor within the 200-
11 foot Preferred Corridor or an Alternative Corridor Segment, NWN shall obtain permission
12 from ODOE for the following deviations: 1) any stream crossing that will not be bored as
13 shown in Supplemental Table P-4 (May 15, 2002); 2) any deviation that would result in
14 impact to a wetland with a higher status code than shown in the April 9, 2002 PHS table; 3)
15 any deviation that would result in impact to Category 3 upland habitat subtypes (as described
16 in Table P-1, Exhibit P) as shown in Supplemental Table P-5 (March 5, 2002). NWN shall
17 not begin construction in a deviation until it has notified ODOE and ODOE has approved the
18 requested deviation.
19
- 20 5) To obtain permission from ODOE for a deviation from the preferred alignment construction
21 corridor, NWN must provide ODOE the following information prior to disturbing the
22 deviation area: 1) the location of the requested deviation; 2) the habitat categories and
23 habitat subtypes of the original preferred alignment construction corridor referenced to
24 Supplemental Table P-4 (May 15, 2002), Supplemental Table P-5 (March 5, 2002) and the
25 PHS April 9, 2002 table; 2) the habitat categories and habitat subtypes within the requested
26 deviation referenced to the tables listed above; 3) the number of trees greater than 6-inch dbh
27 that would be removed; 4) the reason for the deviation; and 5) any measures that NWN
28 proposes to use to limit impact to fish and wildlife habitat in the deviation. If the deviation is
29 due to unanticipated conditions during excavation, NWN shall notify ODOE using the field
30 method described in the following paragraph.
31

32 The field method includes the following steps:

- 33 (1) Identification of a problem with construction in a particular segment of the
34 original preferred alignment;
35 (2) Identification of an alternative segment;
36 (3) Verbal notification of the Department of Energy and, as appropriate, other
37 agencies;
38 (4) Technical review of the alternative segment to ensure that construction in the
39 alternative segment, taking mitigation into account, would not result in
40 significant adverse impacts to resources protected by Council standards or
41 other permitting criteria;
42 (5) Review of zoning to ensure compliance with local land use laws;
43 (6) Provision of information from steps (4) and (5) to OOE;
44 (7) OOE site inspection, with involvement of other agency personnel, as
45 appropriate; and

1 (8) OOE concurrence, generally verbal, with construction in the alternative
2 segment.
3

- 4 6) The decision criteria for ODOE approval of a deviation requested by NWN shall include: 1)
5 whether the deviation would result in a smaller area of impact; 2) whether the deviation
6 would result in impact to the same, a lower or a higher category habitat; and 3) whether
7 NWN provided appropriate documentation to ODOE within the necessary time frame.
8
- 9 7) NWN shall plan, construct, operate, restore, maintain and monitor and the project site
10 consistent with the measures identified in its September 2001 Wetland Mitigation Plan,
11 Section 2.5 "Construction Techniques" pages 2-4 to 2-11; Section 4.0 "Conceptual
12 Mitigation Approach" pages 4-1 to 4-2; Section 5.0 "Proposed Conceptual Mitigation" pages
13 5-1 to 5-3; Section 7.0 "Monitoring" page 7-1; and Section 8.0 "Maintenance and
14 Contingency Plan" page 8-1.
15
- 16 8) NWN shall plan, construct, operate, restore, maintain and monitor the project consistent with
17 the measures identified in its September 2001 Habitat Mitigation Plan, Section 2.2
18 "Mitigation Goals" page 2-4; Section 2.5 "Construction Techniques" page 2-5; Section 4.0
19 "Proposed Conceptual Mitigation by Category" pages 4-1 to 4-3; Section 5.0 "Performance
20 Goals" page 5-1; Section 6.0 "Monitoring" page 6-1; and Section 7.0 "Maintenance Plan"
21 page 7-1.
22
- 23 9) NWN shall plan, construct, operate, restore, maintain and monitor the project consistent with
24 the measure identified in Exhibit P of its March 2001 application for site certificate as
25 supplemented by the June 2001 supplemental Exhibit P.
26
- 27 10) NWN shall construct the project so as to avoid disturbance to all Category 1 habitat and all
28 Category 2 permanent ponds.
29
- 30 11) NWN shall provide a net-benefit to Category 2 habitats that are disturbed by construction.
31 This may include, but is not limited to, placing large woody debris, clean sand, gravel and
32 rocks within the stream channel at or near the crossing location of Category 2 streams,
33 enhancing habitat quality by planting trees and other woody vegetation or by other measures
34 that provide a net benefit that is acceptable to the Department of Energy in consultation with
35 the Oregon Department of Fish and Wildlife.
36
- 37 12) NWN shall use Best Management Practices (BMPs) to confine construction-related
38 disturbance to the construction corridor.
39
- 40 13) NWN shall not disturb wetland areas, riparian areas, or waterways until it has obtained all
41 required section 401 and section 404 permits and approvals, including any required
42 authorization relating to a federally-listed threatened or endangered species. If the conditions
43 in the amended site certificate conflict with conditions imposed by the DEQ in its section 401
44 certification or the U.S. Army Corps in its section 404 permit, NWN shall consult with
45 ODOE and ODFW to resolve the conflict before beginning construction

1
2 Pre-construction

- 3 14) NWN shall incorporate the conditions of the site certificate into its construction documents.
4
5 15) NWN shall provide a copy of its construction documents to the Department before beginning
6 ground-disturbing activity (such as clearing or grading the construction corridor). These
7 shall include five complete sets of detailed maps of the construction corridor that are cross
8 referenced or indexed to habitat category maps provided to OOE.
9
10 16) NWN shall mark the construction corridor to indicate areas where the corridor will be
11 restricted to avoid impact to wetlands, riparian areas, streams and other sensitive, important
12 or significant areas before any ground-disturbing activity (including clearing of vegetation).
13 ODOE shall be notified when marking is completed and ODOE inspectors shall be afforded
14 the opportunity to inspect the marked construction corridor prior to any ground-disturbing
15 activity.
16
17 17) NWN shall document pre-construction conditions at each Category 2 and 3 site within the
18 construction corridor prior to any ground disturbing activity. Documentation shall include an
19 Impact Inventory, including a cross reference to habitat and construction maps, description of
20 the habitat category and habitat unit to be impacted, the number of trees and sizes to be
21 removed, percent native shrub coverage, percent reed canary grass and noxious weed
22 coverage, the acreage of the impacts and photographs of all stream crossings prior to
23 clearing. The Impact Inventory will form the basis of the mitigation and will be included in
24 the Detailed Mitigation Plan. The Impact Inventory shall be prepared by a qualified
25 biologist.
26
27 18) NWN shall give the Department at least 7 days notice before beginning ground-disturbing
28 activity.
29
30 19) NWN shall designate a qualified Environmental Inspector to work on all phases of the
31 project, including pre-construction documentation, pipeline construction, restoration, post
32 construction monitoring and preparation of the Detailed Mitigation Plan. The Environmental
33 Inspector shall have the authority to stop construction activity temporarily to resolve
34 environmental issues.
35
36 20) NWN shall, before beginning ground-disturbing activity, identify to the Department the key
37 personnel responsible for construction and environmental protection, including but not
38 limited to NWN environmental inspectors and the pipeline construction company's
39 environmental inspectors.
40
41 21) NWN shall, before beginning ground-disturbing activity, conduct training of key employees
42 and contractor personnel. Training shall cover applicable environmental regulations,
43 including site certificate conditions that relate to fish and wildlife habitat, and NWN
44 procedures for limiting impact to fish and wildlife habitat. NWN shall provide the

1 Department advance notice of the time and place of training sessions and shall allow
2 Department representatives to attend training sessions.

3
4 Construction

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

9
10 23) NWN shall use topsoil protection measures on all Category 2 and 3 habitats, including
11 upland habitats shown in Table P-1 (March 2001 Application), except permanent ponds (PP2
12 and PP3). Topsoil and subsoil shall be removed and stored separately and backfilled in the
13 reverse order (Conceptual Mitigation Plan, Part 1, Section 2 and CMP, Part 2, Section 2.5).
14 If excavated topsoil contains plants proposed for salvage and re-planting, it shall be replaced
15 within 24-hours. If the topsoil needs to be stored for more than 1 day, it will be covered with
16 geotextile fabric and moistened to prevent drying and to ensure the viability of the plant
17 species present (CMP, Part 1, Section 5.1).

18
19 24) NWN shall, as necessary, use soil compaction mitigation measures on all Category 2 and 3
20 habitats, including uplands. Backfilled soils shall resemble pre-construction soil profiles and
21 compacted soil surfaces shall be hand raked or scarified by appropriate equipment prior to
22 seeding.

23
24 25) NWN shall use, if necessary, imported soil that is free of noxious weeds and reed
25 canarygrass in Category 2 and 3 habitats, including uplands. NWN shall, prior to
26 construction, submit to the Oregon Department of Energy the procedures it will use to ensure
27 that imported soils are free of noxious weeds and reed canarygrass.

28
29 26) NWN shall reduce and control increased sediment and turbidity by: 1) locating crossings to
30 avoid unstable stream banks and the need to remove large trees; 2) dewatering the
31 construction reach during construction (by using a dam-and-flume or hose-and-pump to pass
32 water around the construction area); 3) routing water pumped from trenchlines to temporary
33 surface water detention facilities prior to discharge; 4) using erosion and sediment controls
34 during and after construction; 5) monitoring turbidity during construction; 6) stabilizing
35 stream banks and stream beds after construction; and 7) any other measures that may be
36 appropriate.

37
38 27) NWN shall prevent stream bank instability after construction by: 1) locating crossings to
39 avoid unstable stream banks and the need to remove large trees; 2) stabilizing affected stream
40 banks and 3) using Best Management Practices (BMPs) to control slope erosion after
41 construction.

42
43 28) NWN shall prevent stream bed erosion after construction by restoring stream beds to their
44 original condition (substrate and gradient), using appropriate geotextile fabrics or other
45 measures, and adding large rocks and or gravel if needed.

- 1
2 29) NWN shall prevent loss of spawning substrate by restoring stream beds to their original
3 conditions, including replacing spawning gravels, and using appropriate measures to control
4 or prevent the movement of soil and silt into streams.
5
- 6 30) NWN shall reduce the direct impacts to wetland habitats by: 1) confining construction
7 activities to a 40-foot wide construction corridor and minimizing heavy equipment use within
8 wetlands to the extent practicable; 2) constructing in wetlands when they are dry, to the
9 extent practicable; 3) using construction mats when appropriate; 4) removing topsoil
10 (including plant roots) from the trench separately from subsoil, stockpiling topsoil and
11 subsoil separately and placing the topsoil (including plant roots) on top of the subsoil when
12 backfilling the trench; 5) installing water barriers along the pipeline trench and restoring
13 impermeable soils to prevent draining wetlands; 6) using Best Management Practices
14 (BMPs) to control erosion and turbidity and to prevent movement of loose soil beyond the
15 construction corridor.
16
- 17 31) Where wetlands and streams must be crossed, the pipeline will be routed through the least
18 sensitive portions of the wetland or stream if it is feasible. The scrub-shrub and forested
19 portions of wetlands and riparian areas shall be avoided to the greatest extent possible.
20
- 21 32) Construction staging areas shall be located in upland and clearly marked with signs and
22 temporary fencing.
23
- 24 33) Equipment refueling shall occur a minimum of 100 feet from any wetland or stream channel
25 and within a designated area. The refueling station should be equipped with appropriate
26 hazardous spill containment/clean up materials.
27
- 28 34) Construction through streams with flowing water and adjacent wetlands will occur during the
29 designated ODFW-approved "in-water work times".
30
- 31 35) NWN shall complete each stream crossing within a 24-hour period, if practicable. If the
32 crossings require more than 24 hours to complete, appropriate methods to allow upstream
33 and downstream fish passage for all life stages shall be implemented using methods approved
34 by ODFW.
35
- 36 36) NWN shall provide a qualified biologist on-site to prevent stranding fish and large aquatic
37 invertebrates in the diversion reach during construction across Category 2 and Category 3
38 streams. The qualified biologist must be authorized by NWN to have stop activity authority
39 if necessary to prevent stranding fish and large aquatic invertebrates.
40
- 41 37) All flow diversions shall be removed and the hydrology of the site restored immediately after
42 completion of construction. The stream channel morphology shall be restored to pre-
43 construction conditions including riffle-pool morphology and stream channel substrate. In
44 streams with gravel bottoms, appropriate sized gravel from local sources will be used to

1 replace any stream gravels that are lost as a result of construction. Streambanks will be
2 stabilized and revegetated as soon as practical after construction is completed.

3
4 38) NWN shall locate stream crossings to avoid removal of large (>6" dbh) trees where
5 practicable and reduce the construction corridor from 80 feet in width to 40 feet within
6 riparian and wetland habitats.

7
8 39) NWN shall provide new woody debris in Category 2 habitats where appropriate and as
9 necessary to provide a net benefit in habitat quantity or quality as determined by a qualified
10 fisheries biologist. In-stream woody debris dimension, structure design and placement shall
11 conform to criteria outlined in A Guide to Placing large Wood in Streams, May 1995
12 (Oregon Department of Forestry and Oregon Department of Fish and Wildlife), as
13 determined by a qualified fisheries biologist.

14
15 40) In wetlands and riparian areas, vegetation that must be removed will be cut at ground level,
16 leaving the root system intact. Pulling tree stumps and associated grading activities will be
17 limited to those tree stumps that would directly interfere with trenching, pipe installation and
18 backfill.

19
20 41) Clay trench plugs will be used to prevent diversion of subsurface water from wetlands.
21 Trench plugs will be installed at each end of wetland crossings to prevent diversion of
22 subsurface water from wetlands and avoid changes to wetland hydrology. An environmental
23 monitor will inspect the pipeline trench to check for impermeable soil layers that may be
24 penetrated during trenching. If impermeable layers are found in the trench, they will be
25 avoided where this is possible, or repaired with clay plugs after the pipe is in place. Clay
26 barriers should be installed on each side of any wetland crossing site.

27
28 42) Matting will be used where this is necessary to support construction equipment in wetlands.
29 Heavy construction equipment may work without construction mats in wetlands that are
30 farmed, grazed or dry enough to support the equipment. In wetlands that are not dry enough
31 to support the equipment, all construction activities will be carried out from the matting.
32 Where matting is necessary, equipment will not be allowed in the wetland off the mats, at
33 any time. The mats will be cleaned and inspected prior to placing in the wetland and mats
34 with foreign material will not be used.

35
36 43) Any trees felled within category 2 and 3 habitats shall remain within the habitat site as
37 woody debris. Trees felled within the riparian area shall be used on site for instream habitat
38 structures. If possible the trees should be pushed over to maintain the root ball with the tree
39 trunk.

40
41 44) NWN shall replant appropriate species and numbers of trees or shrubs as indicated by the
42 Impact Inventory in all Category 2 and Category 3 habitats in which NWN removes trees or
43 shrubs. Shrubs or trees less than 6-inch dbh shall be replaced at a 1-to 1 ratio. Trees equal to
44 or greater than 6-inch dbh shall be replanted on a replacement ratio as follows:

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

1
2 45) NWN may salvage and restore native plants removed intact from the pipeline trenching area.
3

4
5 46) NWN shall, at an appropriate location, thoroughly clean each unit of construction equipment
6 with high-pressure washing before the initial move of that unit to the construction site. NWN
7 shall, at an appropriate site, clean all construction mats that have been previously used before
8 moving them to the construction site or placing them in a wetland.
9

10 47) NWN shall, at appropriate locations, thoroughly clean each unit of construction equipment
11 before working in category 2 or 3 wetlands.
12

13 48) NWN shall restore the construction corridor in category 2 and 3 habitats by replanting and
14 seeding with an approved seed mix to re-establish vegetation. NWN shall provide ODOE the
15 proposed ODFW-approved seed mix for review and approval prior to ground disturbing
16 activity. Substitutions to the approved seed mixes must be approved by OOE.
17

18 49) The following actions must be performed immediately after backfilling the trench in trenched
19 areas: (1) installation of erosion control measures; (2) seeding and mulching of exposed soils;
20 (3) returning all stream beds and banks to pre-construction grade; (4) restoration of salvaged
21 plant materials and; (5) placement of woody debris.
22

23 50) NWN must plant trees and shrubs, as indicated by the Impact Inventory and the Detailed
24 Mitigation Plan approved by OOE, within 1 year of construction.
25

26 51) NWN shall prepare and submit to ODOE for review an Impact Inventory protocol prior to
27 ground disturbing activity. The protocol shall include a standardized data sheet and
28 inventory format with all information stated in Condition 17, as well as cross references to
29 habitat and construction maps. Copies of the field-completed impact inventory forms shall
30 be available for review by ODOE inspectors at the job site.
31

32 52) In the event of a release of drilling mud as a result of boring operations during pipeline
33 construction, NWN shall stop the boring operation until a siltation fence is placed around the
34 release point. NWN shall insure that the release point is fully encircled with siltation fencing
35 and that the fencing effectively contains the released mud. The drilling mud will be allowed
36 to vent into the enclosure. NWN shall pump drilling mud from the enclosed area as needed
37 until the boring operation is completed. If the enclosure becomes nearly full, NWN shall

1 remove the drilling mud via a vacuum truck or pump depending on accessibility to the site.
2 NWN shall leave the siltation fencing in place during the boring, back reaming, and pipe-
3 pulling procedures, and until the vent has sealed. NWN shall not remove the enclosure until
4 all evidence of the release has ceased.

5
6 Post-Construction
7

8 53) NWN shall prepare and submit to ODOE a Detailed Mitigation Plan (DMP) within 60 days
9 following the “used and useful” declaration to the OPUC.

10
11 54) In the DMP, NWN shall:

- 12 (a) include the Impact Inventory for all segments of the pipeline;
- 13 (b) describe mitigation measures undertaken during the construction phase;
- 14 (c) propose specific additional mitigation measures that will achieve the fish and wildlife
15 habitat mitigation goals and standards of OAR 635-415-0025 and prevent harm to the
16 federally listed Upper Willamette River steelhead trout and Upper Willamette River
17 Chinook salmon; including species, sizes, and quantities of proposed plantings;
- 18 (d) identify contingency measures, and remedial measures to ensure success criteria are
19 met; and
- 20 (e) provide a realistic schedule for implementation of the DMP.

21
22 55) The Department, in consultation with other agencies, shall review the Draft DMP and
23 provide NWN with its comments, including changes to the DMP, if necessary within 30 days
24 of receipt of the DMP.

25
26 56) Within 30 days following the receipt of ODOE comments, NWN shall prepare and submit to
27 ODOE a Final DMP that incorporates agency comments. The Final DMP shall provide the
28 basis for the monitoring report.

29
30 57) NWN shall monitor the results of implementing the Final DMP and shall provide annual
31 reports to the Department and other agencies for a minimum of three years. The monitoring
32 reports shall include the Impact Inventory and provide documentation about
33 restoration/enhancement methods, survival of salvaged and planted plants, assessment of
34 streambank stability, net benefit in category 2 habitats, photographs from established pre-
35 construction points, including all stream crossings, discussion of success criteria and
36 remedial actions. The reports shall be prepared by a qualified biologist and submitted to the
37 Department and ODFW by December 1.

38
39 58) Success Criteria shall include meeting the ODFW fish and wildlife mitigation goal for each
40 habitat category. In addition, restored areas shall, after 3 years, have: (1) the same number of
41 native trees and shrubs as calculated for replacement in the Impact Inventory and according
42 to the required replacement ratios (this may include native plant volunteers); (2) less than 20
43 percent coverage of reed canary grass and noxious weeds (as defined by Oregon Department
44 of Agriculture and local counties) in habitat units having pre-construction coverage of these
45 plants less than 20 percent and as documented in the impact inventory.

1
2 59) NWN shall take remedial actions if monitoring shows that implementation of the Final DMP
3 is not successful and monitoring shall continue until the success criteria is met.
4

5 Operation and Maintenance
6

7 60) NWN shall allow native vegetation, including trees, within the Maintenance Easement,
8 except in a ten-foot-wide zone over pipeline, in all Category 2, Category 3 and Category 4
9 habitats.
10

11 61) NWN shall control vegetation within Maintenance Easement by mechanical means wherever
12 practicable. NWN shall not use chemical spray within 100 feet of water bodies, including
13 wetlands.
14

15 62) NWN shall notify ODOE prior to any scheduled repair activity that involves excavation, tree
16 removal, or in-water work. The notification shall include site location, proposed activity, and
17 a description of vegetation to be affected, if any. The notification shall also describe
18 proposed measures to restore the repair site and limit impacts to fish and wildlife habitat, if
19 applicable. For emergency repairs necessary to alleviate stress on the pipe or investigate
20 potential damage discovered during inspections required by OPUC or USDOT regulations or
21 this site certificate, NWN may provide the notification as soon as practical following the
22 repair.
23 .

24 *Threatened and Endangered Species*

25 1) NWN shall schedule construction within one mile of documented or newly discovered bald
26 eagle nest sites to avoid the critical breeding and rearing period (January 1 to August 31) for
27 this species.
28

29 *Historic, Cultural and Archaeological Resources*

30 1) Before beginning construction of the pipeline, NWN shall certify that all NWN and contract
31 supervisory personnel with construction responsibility are trained in the identification of
32 cultural resources. NWN shall make plans, subject matter and the schedule for this training
33 available to ODOE before commencement of the training program.
34

35 2) During construction of the pipeline, in the event any additional “archaeological sites” or
36 “archaeological objects” are identified, NWN shall cease all ground-disturbing activities in
37 the area until a qualified archeologist can evaluate the significance of the find. If the
38 archeologist determines that the materials are significant, NWN shall make recommendations
39 to the Council for mitigation in consultation with SHPO, the Department, and other
40 appropriate parties. Mitigation measures shall include avoidance or data recovery. NWN
41 shall not restart work in the affected area until it has demonstrated to the Department that it
42 has complied with the archeological permit requirements administered by SHPO as set forth
43 in OAR Chapter 736, Division 51 (on public land) or has obtained the landowner’s written
44 permission to proceed (on private land.)
45

- 1 3) During construction of the pipeline, NWN shall route the pipeline as described in its
2 application for site certificate and its responses to requests for additional information.
3 Specifically, NWN shall route the pipeline as follows, unless NWN, in consultation with a
4 qualified archaeologist, identifies another location which has less impact to these sites: in the
5 vicinity of site S-1, within the existing 16-inch SMF pipeline corridor on the western
6 boundary of the site; in the vicinity of site 35WN33, within the existing pipeline corridor on
7 the west and south edges of the site; in the vicinity of site 35WN35, within the existing
8 pipeline corridor, offset from the 16-inch SMF pipeline by 10 feet; in the vicinity of site
9 ORWN1/35WN34, west of the existing pipeline corridor and by means of boring under the
10 area; in the vicinity of site S-2, east of the eastern boundary of the site; and in the vicinity of
11 site S-5, in fill and previously disturbed materials under the road within the Barlow Road
12 right-of-way. NWN shall not disturb archaeological sites S-3 and S-4.
13
- 14 4) During construction of the pipeline, NWN shall avoid any disturbance within archaeological
15 sites S-1, S-2, S-3, S-4, 35WN33 and ORWN1/35WN34. If such avoidance result in adverse
16 impact to jurisdictional wetlands or habitat described in Exhibit P of the ASC, causes the use
17 of additional land in the EFU zone outside public right of way, creates a conflict with other
18 Council standards, or creates a condition adverse to human health and safety, NWN shall
19 obtain approval from OOE, in consultation with SHPO, before causing any disturbance
20 within any of these archaeological sites.
21
- 22 5) During construction of the pipeline, NWN shall retain a qualified archaeologist to monitor
23 construction activity in the vicinity of archaeological sites S-1, S-2, S-3, S-4, S-5, 35WN33,
24 35WN35, and ORWN1/35WN34 and all grading and excavation activities in the vicinity of
25 isolated finds I-1 through I-13 to ensure that archaeological resources in these locations are
26 not disturbed.
27
- 28 6) Before beginning construction, NWN shall conduct an archaeological survey of the
29 temporary laydown areas and shall submit a report of the survey to the Department of
30 Energy. If archaeological objects or archaeological sites are discovered in the temporary
31 laydown areas, NWN may not begin construction of that portion of the pipeline until NWN
32 has submitted to the Department a mitigation plan consistent with the other conditions of this
33 site certificate. In preparing the mitigation plan, NWN shall consult with SHPO, the
34 Department, and other appropriate parties.
35
- 36 7) On properties to which NWN has been denied access prior to issue of the site certificate,
37 NWN shall engage a qualified archeological inspector to look for and analyze artifacts, and
38 shall comply with state law regarding these resources, if found.
39

40 *Public Services Standard*
41

- 42 1) NWN shall obtain all required permits from the Oregon Department of Transportation for
43 construction in public road right-of-way and shall conform to the Standard Specifications for
44 Highway Construction, Oregon Department of Transportation, Section 00220 –
45 Accommodation for Public Traffic. Ambulances, fire trucks and police and, in the Dairy

1 Creek Valley area, private vehicles providing emergency transportation services, shall be
2 afforded immediate passage. NWN will assure that a company representative is present on
3 Dairy Creek Road during periods of complete closure Dairy Creek Road.
4

- 5 2) NWN shall perform any road work under permit provisions provided by the affected county
6 for work within the right-of-way along county roads. NWN shall develop and implement
7 traffic control planning measures as part of the county permitting process. NWN will have
8 overall responsibility for assuring that all contractors on the Project comply with these permit
9 conditions. NWN shall ensure contractor compliance through construction inspection
10 programs and construction management personnel.
11
- 12 3) NWN will provide a detailed traffic control plan for each phase of work, showing signs and
13 cones, certification and use of flaggers, and proposed methods of lane closures. NWN will
14 be responsible for safely accommodating public traffic lanes within the construction area.
15 NWN shall submit these plans to the ODOT District manager prior to construction along
16 state roads or to the county road department prior to construction along county roads.
17
- 18 4) NWN shall provide the county road department in each affected county with final
19 construction drawings prior to start of construction in that county. Project construction shall
20 be coordinated with the county's future paving and culvert replacement programs.
21
- 22 5) NWN shall coordinate with school districts along the construction corridor to manage any
23 potential school bus delays during project construction in months when school is in session.
24

25 *Waste Minimization Standard*

- 26 1) NWN shall transport construction waste materials to an appropriate recycling facility or to an
27 approved sanitary landfill for nonrecyclable goods. NWN shall collect scrap steel and
28 welding rod for transportation to a recycling facility. Geotextile and straw bales shall be
29 transported to an approved landfill.
30
- 31 2) Water used for pressure testing shall be disposed of in a manner consistent with a WPCF
32 permit issued by DEQ.
33
- 34 3) NWN shall minimize the use of water by recycling water for the hydrostatic testing and
35 directional drilling process. Bentonite used in the drilling process shall be recycled to the
36 extent practical.
37

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

39
40 Under ORS 469.401(2), EFSC must impose conditions in the site certificate for the protection of
41 public health and safety. Throughout the final order are conditions related to other decisional
42 criteria that are ultimately intended to protect public health and safety. The following conditions
43 protect public health and safety specifically with regard to EFSC standards for surface facilities
44 related to underground natural gas storage and natural gas pipelines.
45

- 1) NWN shall maintain a program to monitor the pipelines to ensure protection of public health and safety, including but not be limited to:
 - a) pressure sensing devices positioned on the pipelines at Miller Station to relay information to both Miller Station and the Portland gas control centers.
 - b) high and low pressure alarms monitored on a 24 hour basis to detect and locate areas where pressure variations may indicate abnormal conditions, and
 - c) emergency response personnel on duty 24 hours a day, at Miller Station or in Portland, trained to respond to situations that require immediate attention.
- 2) The following specifications are deemed commitments by NWN:
 - a) NWN shall specify pipe that meets the requirements for Class 3 locations as defined at 49 CFR 192.5 (March 15, 1999). NWN shall specify .375 inch wall thickness and minimum 52,000 lb. tensile strength in all sections of the pipeline.
 - b) NWN shall perform 100% X-ray testing of all welds on the 24 inch pipeline.
 - c) NWN shall maintain at least 24 inches of clearance between the pipeline and the existing 16 inch line. Minimum separation requirements at 49 CFR 192 shall apply otherwise.
[amendment 1]
 - d) NWN shall maintain a minimum of 48 inches of pipe cover in all locations, and 60 inches in timberland or cultivated land.
 - e) NWN shall hydrostatically test the pipeline at a minimum of 1080 psig in all sections.
 - f) NWN shall use at least a 12 mil thick fusion bonded epoxy (FBE) coating on the pipeline, except that pipe used for road crossings shall have a 25 mil FBE coating.
- 3) Program Development Requirements: Prior to commencement of operations on the 24-inch pipeline, NWN shall develop and obtain ODOE approval for the following programs:
 - a) Training of personnel responsible for patrolling the pipeline, with emphasis on early recognition of conditions indicating increased landslide hazard.
 - b) Accelerated pipeline surveillance program with provisions for increased surveillance in extreme weather years. The program shall include recommendations by a geotechnical engineer for locations that warrant accelerated surveillance in excess of the periodic patrolling requirements for the pipeline in general.
 - c) Training of personnel responsible for drainage control, with emphasis on identifying areas where pipeline installation could increase the drainage hazard and on implementing effective solutions.
 - d) Continuing investigation of internal inspection devices (IID's) or "smart pigs," or other appropriate technologies with the capability to detect internal flaws, corrosion, and other pipeline defects, and development of criteria for determining the utilization of IID's, or any other appropriate technologies for detecting flaws, corrosion and other indications that the likelihood of pipeline failure may have increased. Such criteria shall, at a minimum, be consistent with federal and OPUC regulations.
 - e) Development of criteria to identify the level at which NWN will excavate pipe sections for stress relief, based on strain gauge readings.
- 4) NWN shall design and construct the pipeline substantially in accordance with the representations in ASC Appendix B-1 and Exhibit BB and NWN's July 2001 response to OOE's May 2001 Request for Additional Information (questions on exhibit BB). In the

1 event of a conflict between these commitments and other requirements, 49 CFR Part 192
2 shall prevail.

3
4 **G. PERMITTING REQUIREMENTS OF AGENCIES OTHER THAN EFSC**

5 The Council finds that the NWN Application complies with the requirements for the following
6 permits, subject to conditions recommended in consultation with the affected agencies:
7

- 8 1) Removal/Fill permits from the Division of State Lands, subject to the conditions listed in
9 section IV.D.1 of the Proposed Order (Attachment C of the final order).
- 10
11 2) Limited Water Licenses from the Water Resources Department (WRD), subject to the
12 conditions listed in section IV.D.2 of the Proposed Order (Attachment C of the final order).
- 13
14 3) Water Pollution Control Facilities (WPCF) permits from Department of Environmental
15 Quality (DEQ), subject to the conditions listed in section IV.D.3 of the Proposed Order
16 (Attachment C of the final order).
- 17
18 4) Amendment #2 to the Site Certificate authorizes NWN to divert up to 2 million gallons of
19 water from the Willamette River for construction and hydrostatic testing from an additional
20 site at the marina near where Boone's Ferry Road reaches the south bank of the Willamette
21 River, shown on the figure in the Limited License application submitted to WRD on
22 September 11, 2003 (Exhibit 2 of the application for Amendment 2). WRD shall issue the
23 Limited License with conditions substantially in conformance with those at section IV.C.1 of
24 the Order Approving Amendment 2 and valid for one year from the effective date of the final
25 authorization required for the use to occur.¹ [amendment 2]
- 26
27 5) NWN may discharge up to 1.5 million gallons of hydrostatic testing water within a straw bale
28 enclosure at a site on agricultural property on the east bank of the Pudding River within the
29 200 foot corridor and located at 45° 14' 57"N, 122° 44' 43"W. DEQ shall issue the special
30 WPCF permit substantially as described in the October 7, 2003 letter from Neil Mullane,
31 DEQ to Michael Hayward, NWN, valid until November 30, 2003. NWN shall station
32 individuals at the discharge location to ensure that the rate of discharge does not result in
33 erosion or scour that would result in an excessive increase in turbidity. [amendment 2]

34
35 **SEVERABILITY AND CONSTRUCTION.**

36 If any provision of this Site Certificate is declared by a court to be illegal or in conflict with any
37 law, the validity of the remaining terms and conditions shall not be affected, and the rights and
38 obligations of the parties shall be construed and enforced as if the Site Certificate did not contain
39 the particular provision held to be invalid. In the event of a conflict between the provisions
40 contained in the Site Certificate and the Council's Order, the provisions contained in this Site
41 Certificate shall control.
42

¹ 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

1 **GOVERNING LAW AND FORUM**

- 2 1) This site certificate shall be governed by the laws of the State of Oregon.
3
4 2) Any litigation or arbitration arising out of this agreement shall be conducted in an appropriate
5 forum in Oregon.
6

7 **IN WITNESS WHEREOF**, this Third Amended Site Certificate has been executed by the State
8 of Oregon, acting by and through its Energy Facility Siting Council, and Northwest Natural.
9

10 ENERGY FACILITY SITING COUNCIL
11

12
13 By: _____ Date: _____, 2004
14 Hans Neukomm, Vice-Chair
15

16 NORTHWEST NATURAL
17

18
19 By: _____ Date: _____, 2004