September 16, 2013

Ms. Jill Rolfe
Planning Director
Coos County Planning Department
225 North Adams Street
Coquille, OR 97423

Re: PCGP Alternate Alignments: HBCU 13-04
Supplemental Evidence in Support of Application

Dear Ms. Rolfe:

This letter is written on behalf of Williams Pacific Connector Gas Operator, LLC ("Williams") in support of the application submitted by Pacific Connector Gas Pipeline Company, LP ("Pacific Connector") regarding the proposed alternate alignments for segments of the Pacific Connector Gas Pipeline ("PCGP") alignment approved in the Prior Decisions. As then established, Williams will manage the construction and operation of the PCGP and will manage its day-to-day business affairs as a contractor for the owners.

This letter provides additional evidence in support of the supplemental narrative previously submitted by the applicant on September 13, 2013 (the "Supplemental Application Narrative"). Specifically, this letter addresses certain criteria applicable to the pipeline in the various zoning districts where the proposed alternate alignments will be located. This letter is submitted jointly by Robert Peacock, PCGP Project Manager, and Rodney Gregory, PCGP Land Team Leader. Please make this letter a part of the record of the County’s review proceedings.

1. Exclusive Farm Use Zone

The proposed alternate alignments will cross approximately 4.17 miles of properties zoned Exclusive Farm Use ("EFU"), all of which are privately owned, as shown in Sheets 1 & 2 attached:

- The Brunschmid alternate alignment will cross 0.61 miles of EFU-zoned lands between MP 11.42R to MP 11.84R; and, further, from MP 12.19R to MP 12.39R.
The Stock Slough alternate alignment will cross 0.68 miles of EFU-zoned lands from MP 9.76 to MP 10.45.

There are no residences located within 50 feet of the temporary construction area on EFU-zoned lands.

As explained in the Supplemental Application Narrative and for the reasons described below, the alternate alignments are consistent with the requirements of ORS Chapter 215, OAR 660, Division 33, and the applicable approval criteria of the CCZLDO.

Section 4.9.450 Hearings Body Conditional Uses

The following uses and their accessory uses may be allowed as hearings body conditional uses in the "Exclusive Farm Use" zone and the "Mixed Use" overlay subject to the corresponding review standard and development requirements In Section 4.9.600 and 4.9.700.

C. Utility facilities necessary for public service, except for the purpose of generating power for public use by sale and transmission towers over 200 feet in height. A facility is necessary if it must be situated in an agricultural zone in order for the service to be provided.

As determined in the Prior Decisions, the PCGP is an interstate natural gas pipeline subject to regulation by FERC under Section 7c of the Natural Gas Act ("NGA"). Pacific Connector applied to the Federal Energy Regulatory Commission ("FERC") for authorization to site, construct, and operate the PCGP under Section 7(c) of the NGA. The FERC process thoroughly evaluates all aspects of the PCGP. Pacific Connector received a Certificate of Public Convenience and Necessity ("Certificate") for its proposed natural gas transmission pipeline system in 2009. The Jordan Cove LNG terminal received a Certificate for a proposed LNG import facility in 2009. The previously issued Certificates were vacated by FERC in 2012 and Pacific Connector is now seeking a new Certificate for the PCGP in conjunction with the developers of the Jordan Cove terminal seeking a Certificate for an LNG export facility.

The PCGP will transport natural gas to the LNG terminal on Coos Bay from existing natural gas pipelines near Roseburg, Medford and Malin, Oregon. While the natural gas may eventually be used to generate power for public consumption, the PCGP will not itself be generating or distributing power for public sale. Therefore, as found in the Prior Decisions, the PCGP qualifies as a utility facility under CCZLDO Section 4.9.450.C. As provided in ORS 215.275(1) and OAR 660-033-0130(16), a facility is necessary if it must be situated in an agricultural zone in order for the service to be provided. As was demonstrated in the alternatives discussion contained in Pacific Connector's 2010 PCGP application, and as found to be necessary in the Prior Decisions, the pipeline must cross through EFU-zoned lands in order for the service to be provided. A copy of Pacific Connector's May 11, 2010 evidentiary letter in support of the PCGP application is attached hereto and incorporated into this letter by reference (the "Prior Letter") as Exhibit A.

As discussed in the Prior Letter, guidance for whether a utility facility within an EFU zone is "necessary" is also provided by ORS 215.275 and OAR 660-33-0130(16). Specifically, ORS 215.275(2) states that, to demonstrate that a utility facility is necessary, an applicant must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following six factors: (a) technical and
engineering feasibility; (b) the facility is locationally dependent; (c) lack of available urban and non-resource lands; (d) availability of existing rights-of-way; (e) public health and safety; and other requirements of state or federal agencies. Additional requirements and considerations are included in subsections (3) through (5). However, subsection (6) states that "the provisions of subsections (2) to (5) of this section do not apply to interstate natural gas pipelines and associated facilities authorized by and subject to regulation by the Federal Energy Regulatory Commission." OAR 660-033-0130(16) includes virtually identical factors as well as the Interstate natural gas pipeline exemption. As stated above, the PCGP has been determined to be an interstate natural gas pipeline that is regulated by and authorized by FERC. Consequently, the factors and requirements of ORS 215.275 and OAR 660-033-0130(16) do not apply to this application for approval of the PCGP alternate alignments. Nonetheless, the following explains why the pipeline must be situated on EFU zoned lands, and the alternatives considered in the alignment selection process for the proposed alternate alignments.¹

ORS 215.275 Utility facilities necessary for public service; criteria; rules; mitigating impact of facility.

(1) A utility facility established under ORS 215.213 (l)(d) or 215.283 (l)(d) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service.

As determined in the Prior Decisions, the PCGP is a locationally dependent linear facility that must cross exclusive farm use land in order to provide natural gas service between the Jordan Cove terminal and the existing pipeline systems. As was recognized in the Prior Decisions, linear projects like the PCGP with fixed points of connection present limited opportunities to avoid EFU land. That limitation is greater now in the narrow context of this application, which is based on the need to avoid the Brunschmid conservation easement and multiple Stock Slough crossings in rural residential zones. Accordingly, even more limited opportunities were presented in that context to avoid crossing more EFU land. In fact, in order to avoid those sensitive areas, slight increases in the amount of EFU land crossed occurred in both the Brunschmid and Stock Slough areas. In spite of that fact, the applicant selected alternate alignments that avoid impacting EFU-zoned land as much as possible - only 0.61 miles of EFU land are being crossed by the Brunschmid alternate and only 0.68 miles of EFU land are being crossed by the Stock Slough alternate.

Although ORS 215.275(2) is not directly applicable to this application because the PCGP is a FERC regulated interstate natural gas pipeline project, as would otherwise be required by the statute, Pacific Connector considered as wide a range of alternative alignments as possible within the limited context of avoiding other sensitive areas, and selected the Brunschmid and Stock Slough alternate alignments based a variety of factors that are discussed in detail below.

(2) To demonstrate that a utility facility is necessary, an applicant for approval under ORS 215.213 (l)(d) or 215.283 (l)(d) must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

¹The provisions of the attached Prior Letter of May 11, 2010 from Williams are still applicable to support the same interpretations and determinations in the review of this application as were made in the Prior Decisions.
(a) Technical and engineering feasibility; 

(b) The proposed facility is locationally dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands; 

(c) Lack of available urban and nonresource lands; 

(d) Availability of existing rights of way; 

(e) Public health and safety; and 

(f) Other requirements of state or federal agencies.

Pacific Connector considered reasonable alternatives for the Brunschmid and Stock Slough areas, as follows:

- **Brunschmid Route Alternate.** Section 10.6.2 of Resource Report No. 10, Alternatives, is attached to this letter as Exhibit B. It establishes the reasons for the avoidance of the Brunschmid conservation easement and the fact that other alternatives were initially considered, but were dropped because of additional residential effects and constructability issues. As also stated in the attached Exhibit B, even though WRP Alternative No. 1 involves the fewest changes to the proposed route, that route would directly affect a bald eagle nest. As also noted, the proposed alternate avoids potential geological hazards and facilitates an HDD crossing of the Coos River. See attached Exhibit C showing potential alternative routes to avoid the Brunschmid wetland mitigation site between MP 10.45-MP 10.8. Also see Photos 1-5 attached to Exhibit C. As noted on Photo 5, although the 2009 FEIS Route and the WRP 1 Avoidance Alternative cross less wetland areas than the proposed Brunschmid alternate, those alternatives cross more wet tidal marsh as shown in the Photos. Finally, see attached Exhibit C depicting the areas of problematic road crossings, wet tidal marsh areas, and areas with residential lots and residences, all of which were the types of sensitive areas considered by Pacific Connector in selecting the proposed Brunschmid alternate alignment.

- **Stock Slough Alternate.** As described in Resource Report No. 10, Alternatives, in Table 10.6-19, Exhibit D, the original PCG alignment between MP 9.68 and MP 10.33 (from Pacific Connector’s 2009 FEIS route) has been modified to avoid crossing Stock Slough Road (County Road 54) in a steep road cut as the alignment descends a steep ridge slope. Further, the route modification avoids two crossings of Stock Slough in the tight meandering bends which were crossed immediately below Stock Slough Road and immediate adjacent to a residence. See attached Exhibit E which depicts the problematic areas for road crossings and stream crossings which the Stock Slough alternate avoids, in addition to avoiding two crossings of Stock Slough in rural residential zones. Exhibit E has Photos 1 through 5 which provide visual evidence of the cut slope to be avoided and the meanders of Stock Slough to be avoided by the proposed alternate alignment.
(3) Costs associated with any of the factors listed in subsection (2) of this section may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities. The Land Conservation and Development Commission shall determine by rule how land costs may be considered when evaluating the siting of utility facilities that are not substantially similar.

As noted above, ORS 215.275(3) is not applicable to this application. Therefore, the considerations required by this subsection are likewise inapplicable to this application. Nonetheless, as provided in the response above, the applicant has also complied with this subsection of the statute and states that cost was not the sole, or even the primary factor in considering alternatives and determining the alternate alignments. Instead, safety and integrity are the primary considerations in the alignment selection. However, as discussed above, the primary considerations for the proposed alternate alignments were the avoidance of the Brunschmid conservation easement and the avoidance of multiple Stock Slough crossings in residential zones.

(4) The owner of a utility facility approved under ORS 215.213(1)(d) or 215.283(1)(d) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance; repair or reconstruction of the facility. Nothing in this section shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

ORS 215.275(4) does not apply to the PCGP alternate alignments because they are segments of a FERC regulated interstate natural gas pipeline. Nonetheless, the applicant would accept a condition of approval requiring submittal of an agreement consistent with this requirement for the portions of the alternate alignments located within the EFU zones. Furthermore, as discussed in greater detail below, Pacific Connector will implement an erosion control and revegetation plan both during and following construction that is intended, in part, to ensure that agricultural land crossed by the alternate alignments will be returned to its former condition following construction.

(5) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting under ORS 215.213(1)(d) or 215.283(1)(d) to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

Because the PCGP alternate alignments are segments of a FERC regulated interstate natural gas pipeline, ORS 215.275(5) is not applicable. Nonetheless, plans developed for the alternate alignments will minimize and mitigate the impacts of the pipeline construction and operation on surrounding lands devoted to farm use. The applicant would accept a condition of approval requiring compliance with the plans discussed below.

Alternate alignment construction will have temporary impacts on farming activities within the permanent right-of-way and the temporary construction areas. However, following
construction of the alternate alignments, traditional farming activities may continue both within the temporary construction areas and across the permanent right-of-way. In agricultural areas, the pipeline will be installed so that there will be five feet of soil cover over the pipeline. This will ensure that heavy farming equipment can cross the pipeline area and tilling can occur within the pipeline easement without the risk of damage to the pipeline. More importantly, for purposes of considering the effects on "surrounding farmlands," the PCGP alternate alignments will have no long term impacts on farming activities on lands surrounding the permanent right-of-way and temporary construction areas following alternate alignment construction, and will have limited impacts during construction activities. Traditional farming activities and farm uses may continue in areas surrounding the construction areas both during and following construction.

Pacific Connector will engage in land negotiations with each landowner impacted by the alternate alignments and will compensate each landowner for any temporary and permanent impacts associated with the alternate alignments. Any landowner requirements will be added as stipulations in the landowner agreements, and Pacific Connector will employ land agents during construction of the alternate alignments to ensure the stipulations are implemented.

In addition to landowner compensation, Pacific Connector will implement a variety of measures to ensure that the construction activities associated with the alternate alignments will not impact the ability of landowners to continue normal farming operations following construction. Specific steps will be taken to eliminate or mitigate agricultural impacts. First, topsoil segregation will be performed over the trench line in croplands, hayfields, and pastures. Pacific Connector will stockpile soil from the trench pile separately from all subsoil and will replace the two horizons in the proper order during backfilling and final grading. The purpose of the topsoil segregation is to prevent the potential loss of soil fertility or the incorporation of excess rock into the topsoil. Pacific Connector will also remove any excess rock from the top 12 inches of the soil to the extent practicable in croplands, hayfields, and pastures. In cases where additional topsoil must be imported into agricultural areas, an independent environmental investigator will ensure that the imported topsoil is free of noxious weeds or other deleterious materials, such as rock.

Second, steps will be taken to avoid soil compaction during and after construction activities. Pacific Connector will test for soil compaction in agricultural areas, as well as other areas. If deemed appropriate corrective measures will be employed, including deep scarification or ripping to an average depth of 18 inches where feasible using appropriate wing tipped rippers. In addition to ensuring that long-term impacts to soil productivity do not occur, the corrective measures will also minimize or eliminate the potential for increases in surface water runoff, soil erosion, and sediment delivery. In areas where appropriate, scarifying the subsoil will also promote water infiltration and improve soil aeration and root penetration.

Third, steps will be taken by Pacific Connector to control noxious weeds and soil pests in areas within and adjacent to the right-of-way for the alternate alignments, including agricultural lands. As noted, Pacific Connector consulted with the Oregon Department of Agriculture, as well as BLM and the Forest Service, for recommendations to prevent the introduction, establishment, or spread of weeds, soil pests, and forest pathogens. As recommended, Pacific Connector has conducted initial reconnaissance weed surveys and those surveys will be
mapped once complete. Pacific Connector will also conduct pretreatment, primarily through mechanical operations, by mowing to the ground level. Other mechanical methods include disking, ripping, or chopping. Hand pulling methods may also be utilized in appropriate areas. Infested areas will be cleared in a manner to minimize transport of weed seed, roots, and rhizomes or other vegetative material and soil from the site down the construction right-of-way. While Pacific Connector will not engage in widespread herbicide applicable along the route of the alternate alignments, spot treatments with appropriate herbicides may be conducted where required, depending upon the specific weed and site-specific conditions using integrated weed management principals. In most cases, if an herbicide is used for control, it would be used in combination with other weed control methods. Spot herbicide treatment would only be applied with permission from the landowner or the land managing agency on public lands, and permits for use of herbicides would be obtained prior to any application on federal lands. Any herbicide treatment would be conducted by a licensed applicator using herbicides labeled for the targeted species.

Final grading and permanent erosion control measures of upland areas, including agricultural areas will be completed within 20 days after the trench is backfilled, weather and soil conditions permitting. During cleanup and initial reclamation, Pacific Connector will complete permanent repairs of any fences, gates, drainage ditches, or other structures removed or damaged during construction. All drain tiles crossed by the pipeline will be probed by a qualified specialist to check for damage. Any damaged drain tiles will be repaired to their original condition or better before backfilling. Pacific Connector will work with individual landowners to address specific restoration of active agricultural areas. The specific reclamation procedures will be determined during those discussions with individual landowners to ensure that the reclamation actions are appropriate of each specific crop type or land use.

Pacific Connector will take appropriate measures to make certain that agricultural land is returned as closely as possible to its pre-construction condition. All graded areas associated with the construction of the alternate alignments will be regraded and recontoured as feasible to blend into the surrounding landscape and to reestablish natural drainage patterns. The emphasis during recontouring will be to return the entire right-of-way, as well as any temporary construction areas, to their approximate original contours, to stabilize slopes, control surface drainage, and to aesthetically blend into surrounding contours. Ruts and other scars will be graded and all drainage ditches will be returned to their preconstruction condition.

Pacific Connector will conduct follow-up inspections of all disturbed areas, including agricultural lands, after the first and second growing seasons to determine success of revegetation. Pacific Connector will also monitor croplands for at least two years following restoration to determine the need for additional restoration. Revegetation shall be considered successful in upland areas, including agricultural lands, if upon visual survey, the density and cover of non-nuisance vegetation are similar to the density and cover to adjacent lands that were not disturbed during construction of the alternate alignments. If density and cover are not similar or there are successive weeds, a professional agronomist shall determine the need for additional restoration, and restoration efforts will continue until revegetation is successful. Pacific Connector will also monitor and correct any drainage or irrigation system problems resulting from construction of the alternate alignments in active agricultural areas until the restoration is successfully demonstrated. Additionally, throughout the operational life of the alternate
alignments, operational personnel will be responsible for any unforeseen erosion or potential mass movement that may occur. Should there be a need to excavate the alternate alignments for inspection or repair during operations, Pacific Connector would notify the landowner and make the necessary arrangements to protect any livestock or compensate the landowner for any loss of use.

Pacific Connector will also monitor the right-of-way for infestation of noxious weeds following construction of the alternate alignments. If infestations were to occur along the right-of-way, Pacific Connector would make an assessment of the source of the infestation, the spreading potential, and develop a treatment plan to control the infestation. Pacific Connector's operational staff would also investigate noxious weed issues raised by landowners during the operational life of the alternate alignments.

Pacific Connector has also prepared a separate plan that address groundwater supply monitoring and mitigation to ensure that wells located on agricultural lands, and elsewhere along the alternate alignments, are not negatively impacted by the construction or operation of the alternate alignments. The Groundwater Supply Monitoring and Mitigation Plan (Groundwater Plan) is attached to this letter as Exhibit F. As detailed in the plan, Pacific Connector has completed an initial identification of groundwater supplies within and adjacent to the pipelines construction disturbance areas, including those surrounding the proposed alternate alignments. The results of the initial survey are provided in tables attached to the report and described within the report itself. The final identification and confirmation of the location of groundwater supplies will be conducted through field investigations and contacts within and adjacent to the pipeline right-of-way prior to construction. During the field investigation, landowners will be advised that preconstruction monitoring of identified groundwater supply sources is recommended to establish baseline water quality and yield, and Pacific Connector will seek landowner permission to conduct the testing. Private groundwater wells within 200 feet of the construction disturbance area will be considered potentially susceptible to impacts from construction and will be included in the monitoring program. Landowners with wells outside of the 200-foot monitoring area may also request pre- and/or post-construction water sampling. Section 1.3.1 of the Groundwater Plan describes Pacific Connector's monitoring protocol and schedule in detail. Section 2.1 describes the measures that will be used to prevent impacts to groundwater resources, including spill prevention and containment and blasting plans for those areas where blasting will be necessary during pipeline construction. Finally, Section 3.1 describes the mitigation steps that Pacific Connector will take in the event that it is determined that construction activities impacted a groundwater supply either in terms of yield or quality. In the event impacts do occur despite the prevention measures, Pacific Connector will work with the affected landowner to ensure a temporary water supply, and if necessary, Pacific Connector will replace a permanent water supply. Specific mitigation measures will be coordinated with the individual landowners in order to meet the landowner's specific needs.

For the reasons set forth above, the alternate alignments will not cause a significant change in accepted farming practices nor will they cause a significant increase in the cost of farm practices on either surrounding farmlands or on farming practices within the permanent right-of-way itself.
Section 4.9.600  Siting Standards for Dwellings and Structures in the EFU Zone

As described in the Supplemental Application Narrative and as interpreted in the Prior Decisions, the pipeline is not a structure. The siting criteria of Section 4.9.600 apply to all dwellings and structures within the Exclusive Farm Use zone. A "structure" is defined in Section 2.1.200 as "a walled and roofed building including a gas or liquid storage tank that is principally above ground." The natural gas pipeline will be located entirely beneath the ground surface. While installation of the pipeline will require temporary surface disturbance, once installed, the pipeline will be located under, rather than on the land or "above" the ground that it crosses. None of the project's above-ground facilities are to be located along the proposed alternate alignments within the EFU zone. Therefore, no portion of the proposed alternate alignments within the EFU zoned areas could be characterized as a structure under the county code definition. Consequently, the siting standards at Section 4.9.600 are not applicable to any portion of the proposed alternate alignments within the EFU zone.

Section 4.9.700  Development Standards

As discussed in the Supplemental Application Narrative and in the Prior Decisions, all dwellings and structures approved pursuant to Article 4.9 must be sited in accordance with Section 4.9.700. As discussed above, the pipeline is not a dwelling and has no structures within the EFU zoned areas as that term is defined by the Zoning and Land Development Ordinance. Therefore, none of the development standards of Section 4.9.700 is applicable to the proposed alternate alignments.

2. Forest Zone

The proposed Brunschmid alternate alignment will cross approximately 1.63 miles of Forest-zoned lands within Coos County from approximately MP 9.41R to MP 11.06R (see Sheet 1 to the Supplemental Application Narrative), all of which are located on privately owned lands. The proposed Stock Slough alternate alignment will also cross Forest-zoned land from approximate MP 12.19R to MP 12.39R, for an approximate .10 miles. See attached Environmental Alignment Sheets as Exhibit G to the Supplemental Application Narrative which provides the landowner and zoning information with the parcel data overlaying aerial photography.

As reviewed in the Prior Letter regarding the entire PCGP alignment, Pacific Connector will implement erosion control and revegetation methods during and following construction of the entire project and, specifically, with respect to the proposed alternate alignments in Forest-zoned lands. The following specifics contained in the Prior Letter are equally applicable to the proposed alternate alignments. Although Pacific Connector will obtain a 50-foot permanent right-of-way, only 30 feet centered over the pipeline will be maintained as a clearing through forested areas to protect the pipe from potential root damage and allow for ground and aerial surveillance inspections of the pipeline: The remaining 20 feet of the permanent right-of-way as well as the disturbed temporary construction area will be reforested following construction.

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2 Much of the information contained below can be located within the applicant's Erosion Control and Revegetation Plan ("ECRP") dated June, 2013, a full copy of which has been previously submitted into the record of proceedings for this application. Specifically, see Section 3.3.2, Forest/Timber Clearing, and Section 10.1.3, Supplemental Forest Plantings.
in areas that were forested prior to construction. During forest clearing, all operations and tree falling will occur within the FERC-certified construction work area limits. Trees will be felled or sheared so as to prevent damage to adjacent trees, facilities, or structures and will also be felled away from wetlands, waterbodies, and riparian reserves. Any debris entering a waterbody as a result of felling and yarding of timber will be removed as soon as practical after entry into the waterbody and shall be placed outside the 100-year floodplain where practical. Logs and slash will not be yarded across perennial streams unless fully suspended. During logging/clearing operations, the direction of log or slash movement shall be conducted to minimize sediment delivery to waterbodies, including intermittent streams. Logs firmly embedded in the bed or bank of waterbodies that are in place prior to felling and yarding of timber will not be disturbed, unless they prevent trenching and fluming operations. Any existing logs that are removed from waterbodies to construct the crossing for the alternate alignment will be returned to the waterbody after the alternate alignment has been installed, backfilling is complete, and during the time the streambanks are being restored. Landings for clearing operations will not be located in wetlands or riparian reserves on federal lands, and, where feasible, logs yarded out of wetlands or riparian zones will be skidded with at least one end suspended from the ground so as to minimize soil disturbance. All timber cleared from the right-of-way will be cut and cleared in accordance with landowner and land management agency requirements, where practical. If, based on site-specific conditions, the landowner or land management agency-recommended timber harvesting method is not feasible, an alternate timber harvesting method will be utilized with approval from the landowner or land managing agency.

Merchantable timber will be removed and sold according to landowner/agency stipulations. In certain locations within the construction area log storage could occur for extended periods, if necessary. The construction footprint is not large enough in many areas to accommodate both the logs cleared from the right-of-way and accomplish efficient construction activities simultaneously. Therefore, cut timber must be removed from the right-of-way to avoid project delays due to right-of-way congestion. Avoiding construction and restoration delays and work in the late fall and winter rainy season are important best management practices that Pacific Connector plans to implement to avoid potential and unnecessary impacts.

Pacific Connector expects that the use of all logging methods may be necessary during the project to efficiently remove timber from the right-of-way depending on the specific location. Ground-based skidding and cable (where feasible) logging methods will likely be the standard method; however in some isolated rugged topographic areas with poor access, helicopter logging may be utilized. The specific logging methods will not be determined until a contractor has been selected through the bidding process for each spread. Cable and helicopter logging methods will minimize the potential for soil compaction. Where log skidding is accomplished by machine methods, the following practices will be employed where feasible to minimize the potential for soil compaction:

- Low-ground weight (pressure) vehicles will be used as much as possible.

- The removal of soil duff layers will be avoided so that a cushion exists between equipment or logs and the mineral soil.
• Designated skid trails will be used to restrict soil compaction to a smaller area of the right-of-way (preferably over the pipeline trenching area).

• Compacted landing, yarding, and load-out areas used for timber harvesting during Year One construction will be scarified after use and prior to the rainy season where the potential for sediment delivery to waterbodies is possible. Scarification will promote infiltration, minimize run-off and the potential for sedimentation.

After timber clearing operations, an environmental inspector will determine appropriate temporary best management practices that will be installed to minimize potential erosion and sedimentation impacts. These measures may include:

• Scarification of compacted surface to promote infiltration and reduce run-off;

• Use of slash/brush piles at appropriate locations to prevent off-site runoff and sedimentation;

• Installation of temporary slope breakers at appropriate locations and at spacings to shorten slope lengths, prevent concentrated flow and to divert runoff to stabilized areas;

• Installation of silt fences or straw bale sediment barriers;

• Temporary seeding (using appropriate quick-germinating cover crops such as annual ryegrass or other appropriate quick-growing temporary cover species; this measure would not occur on federal lands where introduced species are restricted); and/or

• Mulching of areas that do not have sufficient cover to ensure effective surface cover.

During final cleanup, all construction debris will be cleared from the right-of-way and disposed of in accordance with state and local regulations. Excess rock and spoil materials will be distributed along the construction right-of-way or disposed of in existing quarries and in permanent disposal sites that have been identified along the construction right-of-way. Non-merchantable logs/stumps may be utilized along the construction right-of-way, within the certificated construction limits, as off-highway vehicle (OHV) barriers or scattered/piled on the right-of-way as wildlife habitat diversity features, where approved by the environmental inspector or Pacific Connector's authorized representative and the landowner or land management agency.

Structures in the vicinity of the proposed alternate alignments are shown on the Environmental Alignment Sheets provided in Exhibit G to this letter. During construction, Pacific Connector will work with the landowners to take the appropriate precautions to protect the structures such as safety fencing, silt fence, signage, or appropriate equipment setback distances.

Section 4.8.400 Review Criteria for Conditional Uses in Section 4.8.300 and Section 4.8.350
A use authorized by Section 4.8.300 and Section 4.8.350 may be allowed provided the following requirements are met. These requirements are designed to make the use compatible with forest operations and agriculture and to conserve values found on forest lands.

A The proposed use will not force a significant change in, or significantly increase the cost of accepted farming or forest practices on agriculture or forest lands; and

As set forth in the Prior Letter and as determined in the Prior Decisions, the PCGP is a subsurface, linear facility that will not force a significant change in, or significantly increase the cost of accepted farming or forest practices on agriculture or forest lands surrounding the pipeline alignment. As previously noted, the predominant activities on lands crossed by and adjacent to the PCGP alignment within the Forest zone are forestry operations.

Potential impacts on forest lands crossed by the proposed alternate alignments can essentially be divided into two categories: (1) the impacts within the permanent right-of-way and temporary construction areas, and (2) impacts on forest practices on surrounding forest lands. Various federal and state permit approvals and consultations will apply to the construction of the alternate alignments on Forest-zoned lands, and those state and federal regulatory schemes operate to minimize impacts on forest lands. A list of the federal and state permits, approvals and consultation requirements for the PCGP project applicable to the alternate alignments is attached to this letter as Exhibit J.

1. Permanent Right-of-Way/Construction Areas

As described in the Prior Letter and in the Supplemental Application Narrative, installation and operation of the PCGP and of the alternate alignments require tree removal in forested areas, which is an accepted forest practice. Neither the creation of the permanent right-of-way nor associated work in construction areas will significantly increase the cost of accepted forest practices. The cost of clearing the right-of-way and construction areas will be borne solely by Pacific Connector. In other words, the property owner will not pay for tree removal, pipeline construction, or restoration and revegetation activities. Additionally, pursuant to federal law, the underlying landowner will be compensated for both the permanent and temporary easement rights and the fair market value of the timber removed temporarily (the construction areas and the outer 10 feet on each side of the permanent right-of-way) and permanently (the 30 foot clearing) either through a negotiated agreement with Pacific Connector or through a formal condemnation process if an agreement cannot be reached. Timber cruises would be conducted in accordance with industry standards prior to vegetation clearing in order to determine timber volumes, values, and species composition. All timber cleared would be cut and cleared in accordance with landowner requirements whenever practicable, and merchantable timber would be removed and sold according to landowner stipulations.

2. Surrounding Forestry Lands

Surrounding forestry operators will also be able to cross the right-of-way for the alternate alignments with heavy hauling and logging equipment provided they coordinate those crossings
with the pipeline operator and safety precautions are implemented to protect the integrity of the alternate alignments. For example, it may be necessary to provide additional cover directly over the areas of the alternate alignments to provide equipment crossing areas and logging roads. If a landowner demonstrates a need to cross areas of the alternate alignments in order to conduct forestry operations, Pacific Connector is committed to working with that property owner to develop an alternate alignment crossing plan that allows the access points to be constructed and used in a safe manner. The property owner will generally be compensated for any additional cost created by compliance with the pipeline crossing plan as it relates to the proposed alternate alignments. While the requirement to coordinate with the pipeline operator may be an inconvenience for some forest operators, it does not constitute a significant change in forestry operations because the operator will be able to continue to cross the pipeline area in order to access or haul timber. Additionally, timber operators generally develop and carefully consider future harvesting and access plans. The need to consult with the pipeline operator if those plans include future crossings of the pipeline right-of-way is not a significant imposition or significant change in normal planning activities. The coordination requirement will also not significantly increase the cost of conducting forestry operations, as the operator will be compensated for any increase in cost created by the presence of the pipeline or any of the proposed alternate alignments.

For all of the reasons set forth above, the subsurface alternate alignments will not force a significant change in, or significantly increase the cost of, forestry operations on forestry lands crossed by or surrounding the PCGP Project.

B. The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel; and

Fire Hazard

As a result of the stringent federal safety controls and PCGP-specific safety plans, the risk of a release of gas from the pipeline is very remote. The risk that a release would lead to a wildfire is further reduced as a result of the PCGP emergency response requirements and capabilities. Therefore, the PCGP project will not significantly increase fire hazards within the Forest zone regarding the proposed alternate alignments.

A Reliability and Safety Report (the "Safety Report") that was specifically prepared for the PCGP Project is attached to this letter as Exhibit H. The Safety Report details the extensive construction, maintenance, monitoring and education safety measures that will be implemented to significantly reduce the risk of a release. For example, the Safety Report generally describes the Integrity Management Program ("IMP") that will be developed to maintain and improve pipeline safety and reliability for the entire PCGP system. The Safety Report also describes the pipeline safety monitoring program. The contents of the Reliability and Safety Report are equally applicable to the proposed Brunschmid and Stock Slough alternate alignments in Forest-zoned lands. As explained in Section 1.5, the first step in Pacific Connector's safety monitoring process is to make certain that the pipeline is constructed property. During construction, the integrity of the coatings designed to protect against corrosion are checked and any imperfections are immediately repaired. Pacific Connector will

13 | P a g e
also conduct an x-ray inspection of 100 percent of the pipeline welds, and will hydrostatically test the pipeline at pressures higher than maximum operating pressures prior to the pipeline being placed in service to ensure integrity of materials and construction. Once the pipeline is in service, Pacific Connector will implement a number of routine monitoring measures including land and aerial patrols, inspection of river crossings, and conducting leak surveys at least once every calendar year as required by federal law. As detailed in the report, in addition to routine monitoring, potentially affected portions of the pipeline will be inspected immediately following any major natural disturbance event, such as an earthquake, flood, or wildfire. In addition to the federally required surveys, Pacific Connector will monitor the pipeline system using a supervisory control and data acquisition system. The data system will gather information about the pipeline and transfer it back to the control center in Salt Lake City, Utah. The control center will be able to coordinate an appropriate response to abnormal data with local maintenance and operation personnel who will be available 24 hours per day, seven days a week. In addition to internal safety protocols and plans, as described in Safety Report Section 1.5, Pacific Connector will comply with an industry Recommended Practice for pipeline operators to develop a public awareness program. The public awareness program will provide information to landowners, excavators, and emergency responders. It will also identify the target audiences that should receive regular correspondence from the pipeline company such as the general public, landowner, local public officials, and one-call centers. The overall goal of the program is to increase and maintain public and landowner awareness of the pipeline to avoid the type of third party activities that could damage the pipe, and to make those parties aware of appropriate response actions and contacts.

Federal Regulations at 49 CFR 192 specifically require that each pipeline operator must establish and maintain liaison with appropriate fire officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and must coordinate mutual assistance. Section 1.5 of the attached Safety Report describes the specific emergency response capabilities of the PCGP. As described in detail in the report, Williams will maintain 24-hour emergency response capabilities. In addition, in compliance with the federal requirements discussed above, Pacific Connector must develop an emergency response plan for the entire system. The emergency response plan will require operations personnel to attend training for emergency response procedures and will require the pipeline operators to meet with local emergency responder groups, including fire departments, to review plans and educate the responder groups on the specific of the pipeline facilities within the relevant service area. As described in Section 1.5 of the attached Safety Report, in addition to the initial coordination with local responders, Pacific Connector will also meet periodically with the groups to review plans and revise them when necessary. Finally, if requested by local response personnel, Pacific Connector will participate in any simulated emergency exercises and post-exercise critiques. Each of the steps described above significantly minimize the risk of the PCGP causing a wildfire.

In the event a fire was to occur on the surface in the vicinity of the pipeline, the presence of the pipeline will not increase fire hazards. As explained in Section 1.1 of the attached Safety Report, fires on the surface are not a direct threat to underground natural gas pipelines because of the insulating effects of soil cover over the pipeline. The Safety Report cites a study conducted in North Carolina that measured both surface and subsurface temperatures during a prescribed burn. Fire temperatures on the surface approached 1,500 degrees Fahrenheit, while
soil temperature at a depth of approximately 2.5 inches was recorded at 113 degrees Fahrenheit during the burn. The Safety Report acknowledges that specific fuel, climate, geographic, and geological conditions at the study area likely differ from those surrounding the PCGP area. Despite those expected differences the study illustrates the order of magnitude a potential fire may have on subsurface temperatures. As noted above, the PCGP will have a minimum of 3 feet of cover within forested areas. Therefore, any risks associated with fires on the surface above the pipeline are eliminated by the depth to the pipeline.

For the reasons set forth above, the proposed alternate alignments in forest-zoned lands will not significantly increase fire hazards.

**Fire Suppression**

As discussed above, the risk of the PCGP causing a fire is exceedingly remote. Therefore, there is not a significant increase in risk to fire response personnel within the fire districts crossed by the PCGP. Nonetheless, in compliance with federal safety regulations, Pacific Connector will coordinate with local emergency response groups prior to commencing pipeline operations. Pacific Connector will meet with local responders, including fire response personnel, to review plans and communicate specifics about the pipeline, including the proposed alternate alignments. If requested Pacific Connector will also participate in any emergency simulation exercises and provide feedback to the emergency responders. As detailed above, Pacific Connector will also provide emergency responders with site specific safety response manuals which will provide general information about the pipeline and natural gas. The manual will also identify the potential risks and provides procedures and contact information in the case of a pipeline related emergency. Finally, the manual will provide site specific information and maps for each jurisdiction. An example of this type of manual is attached as Exhibit H to this letter. As described in Section 1.5 of the attached Safety Report (Exhibit H), in addition to the initial coordination with local responders, Pacific Connector will also meet periodically with the groups to review plans and revise them when necessary. Through these coordination activities, the fire response personnel will become familiar with the location and specific safety and fire issues associated with the PCGP. This information will significantly reduce risks to the fire response personnel responding to a fire either caused by or in the vicinity of the PCGP alignment, or any of the proposed alternate alignments. The majority of the training costs will be borne by Pacific Connector; therefore, the coordination requirements will not significantly increase fire suppression costs.

In the very unlikely event that a fire were to occur as a result of a release from the pipeline, as discussed in detail above, the pipeline operator would take an active role in the emergency response in coordination with the local fire response personnel. The first step the pipeline operator would take would be to shut off the gas to eliminate the fuel source. Therefore, within forested areas, the local fire personnel would take on fire suppression and control duties similar to conventional forest fire situations. Local fire departments within forested areas are already trained and equipped to fight forest fires using conventional techniques and equipment. Therefore, the presence of the pipeline will not require the local fire departments to purchase any new or specialized equipment. Nor will the presence of the pipeline require local fire departments to hire additional personnel.
For the reasons set forth above, the proposed alternate alignments in the Forest-zoned lands will not significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.

C. All uses must comply with section 4.8.600, Section 4.8.700 and Section 4.8.750.

As demonstrated below, the proposed alternate alignments in the Forest-zoned lands will comply with all applicable provisions of Section 4.8.600, 4.8.700, and 4.8.750.

Section 4.8.600 Mandatory Siting Standards Required for Dwellings and Structures in the Forest Zone

The following siting criteria shall apply to all dwellings, including replacement dwellings, and structures in the Forest and Forest Mixed Use zones.

As detailed in the EFU section above, the pipeline is not a "structure" as that term is defined in Section 2.1.200 because the pipeline will be located under, rather than on the land which it crosses. Consequently, the siting standards at Section 4.8.600 are not applicable to the subsurface pipeline or the proposed alternate alignments.

Section 4.8.750 Development Standards

All development, and structures approved pursuant to Article 4.8 shall be sited in accordance with this Section.

E. Fences, Hedges and Walls: No requirement, except for vision clearance provisions in Section 3.3.400 and Fire Siting and Safety Standards in Section 4.7.700.

The pipeline, nor any of the proposed alternate alignments, is not a hedge, fence or wall, and therefore this standard does not apply to the pipeline itself, nor to the proposed alternate alignments. As discussed above, the fire siting standards are either satisfied or inapplicable.

For the reasons set forth above, the proposed alternate alignments are allowed as a conditional use within the F zone.

Thank you for the opportunity to provide additional evidence in support of the proposed alternate alignments for the PCGP. As above stated, the alternate alignments are needed to avoid the Brunschmid Conservation Easement and, further, to avoid multiple crossings of Stock Slough in residential zoning districts. Accordingly, the alternate alignments are needed to avoid sensitive areas and the application to allow them should be approved.

Sincerely,
Williams Pacific Connector Gas Operator, LLC

Bob Peacock
PCGP Project Manager
MDW:ler
En

Rodney Gregory
PCGP Land Team Leader
May 11, 2010

Ms. Patty Evernden  
Planning Director  
Coos County Planning Department  
225 N. Adams Street  
Coquille, OR 97423

Re: PCGP Consolidated Applications  
Supplemental Evidence in Support of Applications

Dear Ms. Evernden:

This letter is written on behalf of Williams Pacific Connector Gas Operator, LLC (Williams) in support of the application submitted by Pacific Connector Gas Pipeline Company, LP (Pacific Connector) regarding the proposed Pacific Connector Gas Pipeline (PCGP). Williams will manage the construction and operation of the PCGP and will manage its day-to-day business affairs as a contractor for the owners.

This letter provides additional evidence in support of the PCGP consolidated land use applications, and is a supplement to the narrative previously submitted by the applicant on April 14, 2010 (the "application narrative"). Specifically, this letter addresses certain criteria applicable to the pipeline in the various zoning districts where the pipeline will be located. This letter is submitted jointly by Derrick Welling, PCGP Project Manager, and Rodney Gregory, PCGP Land Team Leader. Please make this letter a part of the record of the County's review proceedings.

1. **Exclusive Farm Use Zone**

The pipeline will cross approximately 3.72 miles of properties zoned Exclusive Farm Use (EFU), all of which are privately owned. As shown in Table 1 in the application narrative, the pipeline will cross EFU-zoned lands between MP 6.25 to 6.44, 8.28 to 8.54, 10.42 to 10.74, 8.39 to 8.95,
9.06 to 9.10, 10.25 to 10.52, 15.69 to 15.73, 15.89 to 15.95, 19.24 to 20.05, 221.81 to 21.87, 22.71 to 23.06, and 29.52 to 30.15. There are no residences located within 50 feet of the temporary construction area on EFU-zoned lands; there are 2 structures (MPs 10.29 and 10.33) located approximately 30 feet south of the construction area on EFU-zoned lands (see Exhibit 1 to application narrative).

As explained in the application narrative and for the reasons described below, the pipeline is consistent with the requirements of ORS Chapter 215, OAR 660, Division 33, and the applicable approval criteria of the CCZLDO.

Section 4.9.450  Hearings Body Conditional Uses

The following uses and their accessory uses may be allowed as hearings body conditional uses in the "Exclusive Farm Use" zone and the "Mixed Use" overlay subject to the corresponding review standard and development requirements in Section 4.9.600 and 4.9.700.

C. Utility facilities necessary for public service, except for the purpose of generating power for public use by sale and transmission towers over 200 feet in height. A facility is necessary if it must be situated in an agricultural zone in order for the service to be provided.

The PCGP is an interstate natural gas pipeline that has been authorized by and is subject to regulation by FERC under Section 7c of the NGA under which a Certificate of Public Convenience and Necessity has been issued to Pacific Connector to construct, install, own, operate, and maintain the PCGP.

The PCGP will distribute natural gas from the LNG Terminal on Coos Bay to existing natural gas pipelines near Roseburg, Medford and Malin, Oregon. While the natural gas may eventually be used to generate power for public consumption, the PCGP is not itself generating or distributing power for public sale. Therefore, the PCGP qualifies as a utility facility under CCZLDO Section 4.9.450.C. As provided in ORS 215.275(1) and OAR 660-033-0130(16), a facility is necessary if it must be situated in an agricultural zone in order for the service to be provided. As demonstrated in the alternatives discussion below, the pipeline must cross through EFU-zoned lands in order for the service to be provided.

Guidance for whether a utility facility within an EFU zone is "necessary" is also provided by ORS 215.275 and OAR 660-33-0130(16). Specifically, ORS 215.275(2) states that to demonstrate that a utility facility is necessary, an applicant must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following six factors: (a) technical and engineering feasibility; (b) the facility is locationally dependent; (c) lack of available urban and non-resource lands; (d) availability of existing rights-of-way; (e) public health and safety; and other requirements of state or federal agencies. Additional requirements and considerations are included in subsections (3) through (5). However, subsection (6) states that "the provisions of subsections (2) to (5) of this section do not apply to interstate natural gas pipelines and associated facilities authorized by
Ms. Patty Evernden  
May 11, 2010  
Page 3

and subject to regulation by the Federal Energy Regulatory Commission.” OAR 660-033-0130(16) includes virtually identical factors as well as the interstate natural gas pipeline exemption. As stated above, the PCGP is an interstate natural gas pipeline that is regulated by and authorized by FERC. Consequently, the factors and requirements of ORS 215.275 and OAR 660-033-0130(16) do not apply to this application. Nonetheless, the following explains why the pipeline must be situated on EFU zoned lands, and the alternatives considered in the alignment selection process.

ORS 215.275 Utility facilities necessary for public service; criteria; rules; mitigating impact of facility.

(1) A utility facility established under ORS 215.213 (1)(d) or 215.283 (1)(d) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service.

The PCGP is a locationally dependent linear facility that must cross exclusive farm use land in order to provide natural gas service between the Jordan Cove terminal and the existing pipeline systems. In order to achieve the project purpose, the pipeline must start at the Jordan Cove terminal and exit Coos County on the county’s eastern boundary to eventually connect to the existing pipelines near Roseburg, Medford and Malin, Oregon. Given the large expanses of EFU-zoned lands scattered throughout the rural portions of Coos County, even if avoidance of EFU lands were the only consideration in the pipeline alignment, it would not be possible for the pipeline to avoid all EFU zoned lands and maintain a reasonably direct route through Coos County. Therefore, the PCGP must be sited in the Coos County EFU zone in order to provide the planned natural gas transportation. The applicant has selected an alignment that avoids impacting EFU-zoned land as much as possible – only 3.72 miles of the total 49.72 miles crossed within Coos County are zoned EFU. While not eliminated, impacts to EFU lands were minimized during the alignment selection process.

Although ORS 215.275(2) is not directly applicable to this application because the PCGP is a FERC-regulated natural gas pipeline project, as required by the statute Pacific Connector considered a wide range of alternative alignments that would achieve the project purpose, and selected the route based on a variety of factors that are discussed in detail below.

(2) To demonstrate that a utility facility is necessary, an applicant for approval under ORS 215.213 (1)(d) or 215.283 (1)(d) must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

(a) Technical and engineering feasibility;
(b) The proposed facility is locationally dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

EXHIBIT A
Ms. Patty Evernden  
May 11, 2010 
Page 4

(c) Lack of available urban and nonresource lands;
(d) Availability of existing rights of way;
(e) Public health and safety; and
(f) Other requirements of state or federal agencies.

Pacific Connector considered reasonable alternatives for the project generally, as well as a variety of alignment alternatives as part of the FERC process. As shown on the maps attached to this letter as Exhibit 1 (captioned Coos Bay Route Variations & Coos County Alternatives Analysis), Pacific Connector considered many alignment alternatives for the pipeline route. Many factors were considered during pipeline routing, which involved analysis of more than 1,000 miles of route segments. The factors include:

- Construction feasibility to safely construct and operate a large diameter, high pressure natural gas transmission pipeline;
- Pipeline stability (avoiding geohazards where possible, side hill slopes and maximizing ridgeline alignments where possible);
- Avoidance of National Parks, Monuments, and Wilderness Areas;
- Utilization of existing corridors;
- Minimization of disturbance to sensitive areas such as:
  - Reducing waterbody crossings;
  - Reducing impacts to threatened and endangered species and their habitats;
  - Reducing landowner encumbrances by avoiding populated areas; and
  - Minimizing disturbance near scenic waterways and/or byways;
- Minimization of the length of the route. (Increased length increases the overall acreage of disturbance including vegetation clearing, grading and trenching; encumbers additional landowners during construction and requires more permanent right-of-way; typically increases potential impacts to sensitive resources; and increases overall project cost).

As depicted on the maps attached as Exhibit 1, Pacific Connector analyzed alternative pipeline routes and, further, did an analysis of more detailed pipeline route variations, including several within Coos County (i.e., Coos Bay, Blue Ridge, and Big Creek/Spirit Mountain). The current FERC-authorized route was determined based on the factors listed above and in conjunction with federal, tribal, state, and local agency input as well as input from private individuals.

With respect to the various alternative routes as well as the FERC-authorized route in Coos County, every alternative as well as the FERC-authorized route crosses EFU-zoned lands. As stated above, the PCGP route was selected after taking into account numerous factors for each of the alignment alternatives. First, and most importantly, the alignment decisions were based upon the stability, safety, and integrity of constructing and operating the pipeline (i.e., avoiding geologic hazards and side hill slopes). The potential for third-party damage to the pipeline was also considered in routing the pipeline by avoiding congested residential areas to the maximum extent practical. Adequate work areas and access roads as described above were also identified.

EXHIBIT A
to safely construct the pipeline while taking into account landowner and agency concerns, sensitive resources, and construction feasibility.

Second, the alignment has also taken into account the requirements of other state and federal agencies and tribal concerns. For example, the route has been moved out of Coos Bay to the north at the recommendation of the Department of State Lands, the Department of Land Conservation and Development, the Department of Environmental Quality, the National Marine Fisheries Service, and the U.S. Fish and wildlife Service. This reroute requires the pipeline to cross EFU-zoned lands.

Third, as discussed above, the pipeline is a locationally dependent linear facility that must cross EFU land in order to achieve a reasonably direct route. In order to achieve the project purpose, the pipeline must start at the Jordan Cove LNG terminal and exit Coos County on the county’s eastern boundary in order to eventually connect to the existing pipelines near Roseburg, Medford and Malin, Oregon.  Given the number and configuration of EFU-zoned lands in the rural portions of Coos County, it is not possible for the pipeline to avoid all EFU zoned lands and maintain a reasonably direct route through Coos County.

Fourth, because of the linear nature and length of the pipeline, locating the pipeline entirely on urban lands is impossible. Furthermore, to avoid the risks associated with unintentional third party digging near the pipeline area, the routes considered in the alternatives analysis avoided urban and highly populated areas to the maximum extent possible.

Finally, where practicable, the alignment of the PCGP Project utilized existing rights-of-way and pipeline and powerline corridors while providing a safe distance between these existing utilities. A table identifying specific areas where the PCGP is co-located with existing right-of-way and corridors is attached as Exhibit 2 to this letter. While the alignment of the pipeline parallels existing roads and railroads in a number of areas, routing the pipeline entirely within existing right-of-way was not feasible. For example, many existing transportation easements were avoided because of the negative impact to traffic flow during construction. Additionally, many roads are located in valleys or drainage bottoms adjacent to streams where it is not feasible to install a large-diameter, steel pipeline due to large construction area requirements, confining topographic conditions, and waterbodies running parallel to the alignment. Many forest roads are located on steep side slopes where it is impractical to route the pipeline because of constructability/stability requirements and concern with the long-term safety and integrity of the pipeline. To ensure the pipeline is installed properly within consolidated (non-filled) materials and to provide the necessary equipment space, construction on steep side slopes requires significantly more construction areas to accommodate the necessary cuts or excavations. Long-term safety and the potential for third-party damage to the pipeline must be considered. Finally, future road expansions or improvement projects may require the pipeline to be relocated where it

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1 The location of the Jordan Cove LNG terminal itself was selected as the result of a separate alternatives analysis approved by FERC.

EXHIBIT A
has been constructed within road easements, which may create unforeseen environmental, landowner, and system impacts.

(3) Costs associated with any of the factors listed in subsection (2) of this section may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities. The Land Conservation and Development Commission shall determine by rule how land costs may be considered when evaluating the siting of utility facilities that are not substantially similar.

As noted above, ORS 215.275(3) is not applicable to this application. Therefore, the considerations required by this subsection are likewise inapplicable to this application. Nonetheless, as provided in the response above, cost was not the sole, or even primary factor in considering alternatives and determining the pipeline alignment. Instead, safety and integrity are the primary considerations in the alignment selection.

(4) The owner of a utility facility approved under ORS 215.213(1)(d) or 215.283(1)(d) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this section shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

ORS 215.275(4) does not apply to the PCGP Project because it is a FERC regulated natural gas pipeline. Nonetheless, the applicant would accept a condition of approval requiring submittal of an agreement consistent with this requirement for the portions of the pipeline located within the EFU zones. Furthermore, as discussed in greater detail below, Pacific Connector will implement an erosion control and revegetation plan both during and following construction that is intended, in part, to ensure that agricultural land crossed by the pipeline will be returned to its former condition following construction.

(5) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting under ORS 215.213(1)(d) or 215.283(1)(d) to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

Because the PCGP Project is a FERC regulated natural gas pipeline, ORS 215.275(5) is not applicable. Nonetheless, plans developed for the project will minimize and mitigate the impacts of the pipeline construction and operation on surrounding lands devoted to farm use. The applicant would accept a condition of approval requiring compliance with the plans discussed below.
Pipeline construction will have temporary impacts on farming activities within the permanent, right-of-way and the temporary construction areas. However, following construction the pipeline will be installed and traditional farming activities may continue both within the temporary construction areas and across the permanent right-of-way. In agricultural areas, the pipeline will be installed so that there will be five feet of soil cover over the pipeline. This will ensure that heavy farming equipment can cross the pipeline area and tilling can occur within the pipeline easement without the risk of damage to the pipeline. More importantly, for purposes of considering the effects on “surrounding farmlands,” the PCGP project will have no long term impacts on farming activities on lands surrounding the permanent right-of-way and temporary construction areas following pipeline construction, and will have limited impacts during construction activities. Traditional farming activities and farm uses may continue in areas surrounding the construction areas both during and following construction.

Pacific Connector will engage in land negotiations with each landowner impacted by the project and will compensate each landowner for any temporary and permanent impacts associated with the project. Any landowner requirements will be added as stipulations in the landowner agreements, and Pacific Connector will employ land agents during construction to ensure the stipulations are implemented.

In addition to landowner compensation, Pacific Connector will implement a variety of measures to ensure that the construction activities will not impact the ability of landowners to continue normal farming operations following construction. Specific steps will be taken to eliminate or mitigate agricultural impacts. First, topsoil segregation will be performed over the trench line in croplands, hayfields, and pastures. Pacific Connector will stockpile soil from the trench pile separately from all subsoil and will replace the two horizons in the proper order during backfilling and final grading. The purpose of the topsoil segregation is to prevent the potential loss of soil fertility or the incorporation of excess rock into the topsoil. Pacific Connector will also remove any excess rock from the top 12 inches of the soil to the extent practicable in croplands, hayfields, and pastures. In cases where additional topsoil must be imported into agricultural areas, an independent environmental investigator will ensure that the imported topsoil is free of noxious weeds or other deleterious materials, such as rock.

Second, steps will be taken to avoid soil compaction during and after construction activities. Pacific Connector will test for soil compaction in agricultural areas, as well as other areas. If deemed appropriate corrective measures will be employed, including deep scarification or ripping to an average depth of 18 inches where feasible using appropriate wing tipped rippers. In addition to ensuring that long-term impacts to soil productivity do not occur, the corrective measures will also minimize or eliminate the potential for increases in surface water runoff, soil erosion, and sediment delivery. In areas where appropriate, scarifying the subsoil will also promote water infiltration and improve soil aeration and root penetration.

Third, steps will be taken by Pacific Connector to control noxious weeds and soil pests in areas within and adjacent to the pipeline right-of-way, including agricultural lands. As noted, Pacific Connector consulted with the Oregon Department of Agriculture, as well as BLM and the Forest
Service, for recommendations to prevent the introduction, establishment, or spread of noxious weeds, soil pests, and forest pathogens. As recommended, Pacific Connector has conducted initial reconnaissance weed surveys and those surveys will be mapped once complete. Pacific Connector will also conduct pretreatment primarily through mechanical operations by mowing to the ground level. Other mechanical methods include diking, ripping, or chopping. Hand pulling methods may also be utilized in appropriate areas. Infested areas will be cleared in a manner to minimize transport of weed seed, roots, and rhizomes or other vegetative material and soil from the site down the construction right-of-way. While Pacific Connector will not engage in widespread herbicide applicable along the pipeline route, spot treatments with appropriate herbicides may be conducted where appropriate, depending upon the specific weed and site-specific conditions using integrated weed management principals. In most cases, if an herbicide is used for control, it would be used in combination with other weed control methods. Spot herbicide treatment would only be applied with permission from the landowner or the land managing agency on public lands, and permits for use of herbicides would be obtained prior to any application on federal lands. Any herbicide treatment would be conducted by a licensed applicator using herbicides labeled for the targeted species.

Final grading and permanent erosion control measures of upland areas, including agricultural areas, will be completed within 20 days after the trench is backfilled, weather and soil conditions permitting. During cleanup and initial reclamation, Pacific Connector will complete permanent repairs of any fences, gates, drainage ditches, or other structures removed or damaged during construction. All drain tiles crossed by the pipeline will be probed by a qualified specialist to check for damage. Any damaged drain tiles will be repaired to their original condition or better before backfilling. Pacific Connector will work with individual landowners to address specific reclamation of active agricultural areas. The specific reclamation procedures will be determined during those discussions with individual landowners to ensure that the reclamation actions are appropriate for each specific crop type or land use.

Pacific Connector will take appropriate measures to make certain that agricultural land is returned as closely as possible to its pre-construction condition. All graded areas associated with pipeline construction will be regraded and contoured as feasible to blend into the surrounding landscape and to reestablish natural drainage patterns. The emphasis during recontouring will be to return the entire right-of-way, as well as any temporary construction areas, to their approximate original contours, to stabilize slopes, control surface drainage, and to aesthetically blend into surrounding contours. Ruts and other scars will be graded and all drainage ditches will be returned to their preconstruction condition.

Pacific Connector will conduct follow-up inspections of all disturbed areas, including agricultural lands, after the first and second growing seasons to determine success of revegetation. Pacific Connector will also monitor croplands for at least two years following restoration to determine the need for additional restoration. Revegetation shall be considered successful in upland areas, including agricultural lands, if upon visual survey, the density and cover of non-nuisance vegetation are similar to the density and cover to adjacent lands not disturbed during pipeline construction. If density and cover are not similar or there are
successive weeds, a professional agronomist shall determine the need for additional restoration, and restoration efforts will continue until revegetation is successful. Pacific Connector will also monitor and correct any drainage or irrigation system problems resulting from pipeline construction in active agricultural areas until the restoration is successfully demonstrated. Additionally, throughout the operational life of the pipeline, operational personnel will be responsible for any unforeseen erosion or potential mass movement that may occur. Should there be a need to excavate the pipe for inspection or repair during operations, Pacific Connector would notify the landowner and make the necessary arrangements to protect any livestock or compensate the landowner for any loss of use.

Pacific Connector will also monitor the right-of-way for infestation of noxious weeds following construction. If infestations were to occur along the right-of-way, Pacific Connector would make an assessment of the source of the infestation, the spreading potential, and develop a treatment plan to control the infestation. Pacific Connector’s operational staff would also investigate noxious weed issues raised by landowners during the operational life of the pipeline.

Pacific Connector has also prepared a separate plan that address groundwater supply monitoring and mitigation to ensure that wells located on agricultural lands, and elsewhere along the pipeline alignment, are not negatively impacted by the pipeline construction or operation. The Groundwater Supply Monitoring and Mitigation Plan (Groundwater Plan) is attached to the application narrative as Exhibit 3. As detailed in the plan, Pacific Connector has completed an initial identification of groundwater supplies within and adjacent to the pipeline construction disturbance area. The results of the initial survey are provided in tables attached to the report and described within the report itself. The final identification and confirmation of the location of groundwater supplies will be conducted through field investigations and contacts within and adjacent to the pipeline right-of-way prior to construction. During the field investigation, landowners will be advised that preconstruction monitoring of identified groundwater supply sources is recommended to establish baseline water quality and yield, and Pacific Connector will seek landowner permission to conduct the testing. Private groundwater wells within 200 feet of the construction disturbance area will be considered potentially susceptible to impacts from construction and will be included in the monitoring program. Landowners with wells outside of the 200-foot monitoring area may also request pre- and/or post-construction water sampling. Section 1.3.1 of the Groundwater Plan describes Pacific Connector’s monitoring protocol and schedule in detail. Section 2.1 describes the measures that will be used to prevent impacts to groundwater resources, including spill prevention and containment and blasting plans for those areas where blasting will be necessary during pipeline construction. Finally, Section 3.1 describes the mitigation steps that Pacific Connector will take in the event that it is determined that construction activities impacted a groundwater supply either in terms of yield or quality. In the event impacts do occur despite the prevention measures, Pacific Connector will work with the affected landowner to ensure a temporary water supply, and if necessary, Pacific Connector will replace a permanent water supply. Specific mitigation measures will be coordinated with the individual landowners in order to meet the landowner’s specific needs.
For the reasons set forth above, the project will not cause a significant change in accepted farming practices nor will it cause a significant increase in the cost of farm practices on either surrounding farmlands or on farming practices within the permanent right-of-way itself.

Section 4.9.600  Siting Standards for Dwellings and Structures in the EFU Zone

As described in the application narrative, the pipeline is not a structure. The siting criteria of Section 4.9.600 apply to all dwellings and structures within the Exclusive Farm Use zone. A "structure" is defined in Section 2.1.200 as "a walled and roofed building including a gas or liquid storage tank that is principally above ground." The natural gas pipeline will be located entirely beneath the ground surface. While installation of the pipeline will require temporary surface disturbance, once installed, the pipeline will be located under, rather than on the land or "above" the ground that it crosses. None of the project’s above-ground facilities is located within the EFU zone. Therefore, no portion of the pipeline within the EFU zoned areas could be characterized as a structure under the county code definition. Consequently, the siting standards at Section 4.9.600 are not applicable to the portion of the pipeline within the EFU zone.

Section 4.9.700  Development Standards

As discussed in the application narrative, all dwellings and structures approved pursuant to Article 4.9 must be sited in accordance with Section 4.9.700. As discussed above, the pipeline is not a dwelling and has no structures within the EFU zoned areas as that term is defined by the Zoning and Land Development Ordinance. Therefore, none of the development standards of Section 4.9.700 is applicable to the pipeline.

2.  Forest Zone

The pipeline will cross approximately 39.47 miles of Forest-zoned lands within Coos County (see Tables 1 and 2 in the application narrative). Of the 39.47 miles, 10.76 miles are on BLM-managed lands, while the remaining segments are located on privately owned lands. The Environmental Alignment Sheets in Exhibit 1 to the application narrative provide the landowner and zoning information with the parcel data overlaying aerial photography.

The majority of the pipeline route through Coos County is located on Forest-zoned lands. As shown on Table 1 in the application narrative, the pipeline would cross Forest-zoned lands between the following mileposts: 4.22 to 6.25, 6.44 to 8.28, 8.54 to 10.42, 8.95 to 9.06, 9.10 to 10.12, 10.52 to 10.97, 11.32 to 11.94, 12.04 to 12.47, 12.49 to 14.22, 14.28 to 15.69, 15.73 to 15.89, 15.95 to 19.24, 20.05 to 21.81, 21.87 to 22.59, 23.06 to 29.52, 30.15 to 45.70.

Although Pacific Connector will obtain a 50-foot permanent right-of-way, only 30 feet centered over the pipeline will be maintained as a clearing through forested areas to protect the pipe from potential root damage and allow for ground and aerial surveillance inspections of the pipeline. The remaining 20 feet of the permanent right-of-way as well as the disturbed temporary construction area will be reforested following construction in areas that were forested prior to
construction. During forest clearing, all operations and tree falling will occur within the FERC-certificated construction work area limits. A detailed description of the activities and impacts of the PCOP within forested areas is included in Section 4.4.2 of the FEIS, which is attached as Exhibit 3 to this letter. Trees will be felled or sheared so as to prevent damage to adjacent trees, facilities, or structures and will also be felled away from wetlands, waterbodies, and riparian reserves. Any debris entering a waterbody as a result of felling and yarding of timber will be removed as soon as practical after entry into the waterbody and shall be placed outside the 100-year floodplain where practical. Logs and slash will not be yarded across perennial streams unless fully suspended. During logging/clearing operations, the direction of log or slash movement shall be conducted to minimize sediment delivery to waterbodies, including intermittent streams. Logs firmly embedded in the bed or bank of waterbodies that are in place prior to felling and yarding of timber will not be disturbed, unless they prevent trenching and fluming operations. Any existing logs that are removed from waterbodies to construct the pipeline crossing will be returned to the waterbody after the pipeline has been installed, backfilling is complete, and during the time the streambanks are being restored. Landings for clearing operations will not be located in wetlands or riparian reserves on federal lands, and, where feasible, logs yarded out of wetlands or riparian zones will be skidded with at least one end suspended from the ground so as to minimize soil disturbance. All timber cleared from the right-of-way will be cut and cleared in accordance with landowner and land management agency requirements, where practical. If, based on site-specific conditions, the landowner or land management agency-recommended timber harvesting method is not feasible, an alternate timber harvesting method will be utilized with approval from the landowner or land managing agency.

Merchantable timber will be removed and sold according to landowner/agency stipulations. In certain locations within the construction area log storage could occur for extended periods, if necessary. The construction footprint is not large enough in many areas to accommodate both the logs cleared from the right-of-way and accomplish efficient construction activities simultaneously. Therefore, cut timber must be removed from the right-of-way to avoid project delays due to right-of-way congestion. Avoiding construction and restoration delays and work in the late fall and winter rainy season are important best management practices that Pacific Connector plans to implement to avoid potential and unnecessary impacts.

Pacific Connector expects that the use of all logging methods may be necessary during the project to efficiently remove timber from the right-of-way depending on the specific location. Ground-based skidding and cable (where feasible) logging methods will likely be the standard method; however in some isolated rugged topographic areas with poor access, helicopter logging may be utilized. The specific logging methods will not be determined until a contractor has been selected through the bidding process for each spread. Cable and helicopter logging methods will minimize the potential for soil compaction. Where log skidding is accomplished by machine methods, the following practices will be employed where feasible to minimize the potential for soil compaction:

- Low-ground weight (pressure) vehicles will be used as much as possible.
The removal of soil duff layers will be avoided so that a cushion exists between equipment or logs and the mineral soil.

- Designated skid trails will be used to restrict soil compaction to a smaller area of the right-of-way (preferably over the pipeline trenching area).
- Compacted landing, yarding, and load-out areas used for timber harvesting during Year One construction will be scarified after use and prior to the rainy season where the potential for sediment delivery to waterbodies is possible. Scarification will promote infiltration, minimize run-off and the potential for sedimentation.

After timber clearing operations, an environmental inspector will determine appropriate temporary best management practices that will be installed to minimize potential erosion and sedimentation impacts. These measures may include:

- Scarification of compacted surface to promote infiltration and reduce run-off;
- Use of slash/brush piles at appropriate locations to prevent off-site runoff and sedimentation;
- Installation of temporary slope breakers at appropriate locations and at spacings to shorten slope lengths, prevent concentrated flow and to divert runoff to stabilized areas;
- Installation of silt fences or straw bale sediment barriers;
- Temporary seeding (using appropriate quick-germinating cover crops such as annual ryegrass or other appropriate quick-growing temporary cover species; this measure would not occur on federal lands where introduced species are restricted); and/or
- Mulching of areas that do not have sufficient cover to ensure effective surface cover.

During final cleanup, all construction debris will be cleared from the right-of-way and disposed of in accordance with state and local regulations. Excess rock and spoil materials will be distributed along the construction right-of-way or disposed of in existing quarries and in permanent disposal sites that have been identified along the construction right-of-way. Non-merchantable logs/stumps may be utilized along the construction right-of-way, within the certificated construction limits, as off-highway vehicle (OHV) barriers or scattered/piled on the right-of-way as wildlife habitat diversity features, where approved by the environmental inspector or Pacific Connector’s authorized representative and the landowner or land management agency.

There are no residences within 100 feet of the construction area within Forest-zoned lands. There are several structures within 100 feet of the construction area. The structures are shown on the Environmental Alignment Sheets provided in Exhibit 1 to the application narrative. During construction, Pacific Connector will work with the landowners to take the appropriate precautions to protect the structures such as safety fencing, silt fence, signage, or appropriate equipment setback distances.

On Forest-zoned lands, Pacific Connector will need to construct one permanent access road at MP 28.40 on private/BLM land in order to access block valve #4. The permanent access road
will be a private road that is accessory to the pipeline. See alignment sheet #28 in application narrative Exhibit 1.

Two block valves would be located on Forest-zoned lands – both on BLM lands. Both block valve assemblies would be located within the permanent right-of-way for the pipeline, and will not result in any independent or additional impacts on forest operations. The block valve assemblies themselves are unobtrusive and are located in small fenced areas. A photograph of a typical block valve area is attached to this letter as Exhibit 4.

Section 4.8.400 Review Criteria for Conditional Uses in Section 4.8.300 and Section 4.8.350

A use authorized by Section 4.8.300 and Section 4.8.350 may be allowed provided the following requirements are met. These requirements are designed to make the use compatible with forest operations and agriculture and to conserve values found on forest lands.

A. The proposed use will not force a significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands; and

The PCGP is a subsurface, linear facility that will not force a significant change in, or significantly increase the cost of accepted farming or forest practices on agriculture or forest lands surrounding the pipeline alignment. The predominant activities on lands crossed by and adjacent to the PCGP alignment within the Forest zone are forestry operations.

Potential impacts on forest lands crossed by the PCGP can essentially be divided into two categories: (1) the impacts within the permanent right-of-way and temporary construction areas, and (2) impacts on forest practices on surrounding forest lands. Various federal and state permit approvals and consultations will apply to the construction of the pipeline on forest-zoned lands, and those state and federal regulatory schemes operate to minimize impacts on forest lands. A list of the federal and state permits, approvals and consultation requirements for the PCGP project is attached to this letter as Exhibit 5.

1. Permanent right-of-way/construction areas

As described in the application narrative, installation and operation of the PCGP requires tree removal in forested areas, which is an accepted forest practice. Neither the creation of the permanent right-of-way nor associated work in construction areas will significantly increase the cost of accepted forest practices. The cost of clearing the right-of-way and construction areas will be borne solely by Pacific Connector. In other words, the property owner will not pay for tree removal, pipeline construction, or restoration and revegetation activities. Additionally, pursuant to federal law, the underlying landowner will be compensated for both the permanent and temporary easement rights and the fair market value of the timber removed temporarily (the
construction areas and the outer 10 feet on each side of the permanent right-of-way) and permanently (the 30 foot clearing) either through a negotiated agreement with Pacific Connector or through a formal condemnation process if an agreement cannot be reached. Timber cruises would be conducted in accordance with industry standards prior to vegetation clearing in order to determine timber volumes, values, and species composition. All timber cleared would be cut and cleared in accordance with landowner requirements whenever practicable, and merchantable timber would be removed and sold according to landowner stipulations.

2. Surrounding Forestry Lands

Surrounding forestry operators will also be able to cross the pipeline right-of-way with heavy hauling and logging equipment provided they coordinate those crossings with the pipeline operator and safety precautions are implemented to protect the integrity of the pipeline. For example, it may be necessary to provide additional cover directly over the pipeline area in equipment crossing areas and logging roads. If a landowner demonstrates a need to cross the pipeline in order to conduct forestry operations, Pacific Connector is committed to working with that property owner to develop a pipeline crossing plan that allows the access points to be constructed and used in a safe manner. The property owner will generally be compensated for any additional cost created by compliance with the pipeline crossing plan. While the requirement to coordinate with the pipeline operator may be an inconvenience for some forest operators, it does not constitute a significant change in forestry operations because the operator will be able to continue to cross the pipeline area in order to access or haul timber. Additionally, timber operators generally develop and carefully consider future harvesting and access plans. The need to consult with the pipeline operator if those plans include future crossings of the pipeline right-of-way is not a significant imposition or significant change in normal planning activities. The coordination requirement will also not significantly increase the cost of conducting forestry operations, as the operator will be compensated for any increase in cost created by the presence of the pipeline.

For all of the reasons set forth above, the subsurface pipeline will not force a significant change in, or significantly increase the cost of, forestry operations on forestry lands crossed by or surrounding the PCGP Project.

B. The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel; and

Fire Hazard

As a result of the stringent federal safety controls and PCGP-specific safety plans, the risk of a release of gas from the pipeline is very remote. The risk that a release would lead to a wildfire is further reduced as a result of the PCGP emergency response requirements and capabilities. Therefore, the PCGP project will not significantly increase fire hazards within the Forest zone.
Ms. Patty Evernden  
May 11, 2010  
Page 15

The general requirements of 49 CFR 192 are described in the Reliability and Safety section of the Final Environmental Impact Statement (FEIS) for the pipeline, Section 4.12.10 (a copy of which is attached to this letter as Exhibit 6). As explained in that section, Part 192 prescribes the minimum standards for operating and maintaining pipeline facilities, including the requirement to establish a written plan governing those activities. Further, the requirements of state and federal agencies including the BLM, USFS and ODF also protect against fire hazards. See Exhibit 5 list of federal and state permit requirements for the PCGP project.

A Reliability and Safety Report (the "Safety Report") that was specifically prepared for the PCGP Project is attached to this letter as Exhibit 7. The Safety Report details the extensive construction, maintenance, monitoring and education safety measures that will be implemented to significantly reduce the risk of a release. For example, the Safety Report generally describes the Integrity Management Program (IMP) that will be developed to maintain and improve pipeline safety and reliability for the entire PCGP system. The Safety Report also describes the pipeline safety monitoring program. As explained in Section 1.6, the first step in Pacific Connector’s safety monitoring process is to make certain that the pipeline is constructed properly. During construction, the integrity of the coatings designed to protect against corrosion are checked and any imperfections are immediately repaired. Pacific Connector will also conduct an x-ray inspection of 100 percent of the pipeline welds, and will hydrostatically test the pipeline at pressures higher than maximum operating pressures prior to the pipeline being placed in service to ensure integrity of materials and construction. Once the pipeline is in service, Pacific Connector will implement a number of routine monitoring measures including land and aerial patrols, inspection of river crossings, and conducting leak surveys at least once every calendar year as required by federal law. As detailed in the report, in addition to routine monitoring, potentially affected portions of the pipeline will be inspected immediately following any major natural disturbance event, such as an earthquake, flood, or wildfire. In addition to the federally required surveys, Pacific Connector will monitor the pipeline system using a supervisory control and data acquisition system. The data system will gather information about the pipeline and transfer it back to the control center in Salt Lake City, Utah. The control center will be able to coordinate an appropriate response to abnormal data with local maintenance and operation personnel who will be available 24 hours per day, seven days a week. In addition to internal safety protocols and plans, as described in Safety Report Section 1.6, Pacific Connector will comply with an industry Recommended Practice for pipeline operators to develop a public awareness program. The public awareness program will provide information to landowners, excavators, and emergency responders. It will also identify the target audiences that should receive regular correspondence from the pipeline company such as the general public, landowners, local public officials, and one-call centers. The overall goal of the program is to increase and maintain public and landowner awareness of the pipeline to avoid the type of third party activities that could damage the pipe, and to make those parties aware of appropriate response actions and contacts.

Federal Regulations at 49 CFR 192 specifically require that each pipeline operator must establish and maintain liaison with appropriate fire officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and must coordinate
mutual assistance. Section 1.6.1 of the attached Safety Report describes the specific emergency response capabilities of the PCGP. As described in detail in the report, Williams will maintain 24-hour emergency response capabilities. In addition, in compliance with the federal requirements discussed above, Pacific Connector must develop an emergency response plan for the entire system. The emergency response plan will require operations personnel to attend training for emergency response procedures and will require the pipeline operators to meet with local emergency responder groups, including fire departments, to review plans and educate the responder groups on the specific of the pipeline facilities within the relevant service area. As described in Section 1.6.1 of the attached Safety Report, in addition to the initial coordination with local responders, Pacific Connector will also meet periodically with the groups to review plans and revise them when necessary. Finally, if requested by local response personnel, Pacific Connector will participate in any simulated emergency exercises and post-exercise critiques. Each of the steps described above significantly minimize the risk of the PCGP causing a wildfire.

In the event a fire was to occur on the surface in the vicinity of the pipeline, the presence of the pipeline will not increase fire hazards. As explained in Section 1.2 of the attached Safety Report, fires on the surface are not a direct threat to underground natural gas pipelines because of the insulating effects of soil cover over the pipeline. The Safety Report cites a study conducted in North Carolina that measured both surface and subsurface temperatures during a prescribed burn. Fire temperatures on the surface approached 1,500 degrees Fahrenheit, while soil temperature at a depth of approximately 2.5 inches was recorded at 113 degrees Fahrenheit during the burn. The Safety Report acknowledges that specific fuel, climate, geographic, and geological conditions at the study area likely differ from those surrounding the PCGP area. Despite those expected differences the study illustrates the order of magnitude a potential fire may have on subsurface temperatures. As noted above, the PCGP will have a minimum of 3 feet of cover within forested areas. Therefore, any risks associated with fires on the surface above the pipeline are eliminated by the depth to the pipeline.

For the reasons set forth above, the PCGP Project will not significantly increase fire hazard.

Fire Suppression

As discussed above, the risk of the PCGP causing a fire is exceedingly remote. Therefore, there is not a significant increase in risk to fire response personnel within the fire districts crossed by the PCGP. Nonetheless, in compliance with federal safety regulations, Pacific Connector will coordinate with local emergency response groups prior to commencing pipeline operations. As detailed in the attached FEIS Section 4.12.10 (Exhibit 6), Pacific Connector will meet with local responders, including fire response personnel, to review plans and communicate specifics about the pipeline. If requested Pacific Connector will also participate in any emergency simulation exercises and provide feedback to the emergency responders. As detailed above, Pacific Connector will also provide emergency responders with site-specific safety response manuals which will provide general information about the pipeline and natural gas. The manual will also identify the potential risks and provides procedures and contact information in the case of a pipeline related emergency. Finally, the manual will provide site specific information and maps.
for each jurisdiction. An example of this type of manual is attached as Exhibit 8 to this letter. As described in Section 1.6.1 of the attached Safety Report (Exhibit 7), in addition to the initial coordination with local responders, Pacific Connector will also meet periodically with the groups to review plans and revise them when necessary. Through these coordination activities, the fire response personnel will become familiar with the location and specific safety and fire issues associated with the PCGP. This information will significantly reduce risks to the fire response personnel responding to a fire either caused by or in the vicinity of the PCGP alignment. The majority of the training costs will be borne by Pacific Connector; therefore, the coordination requirements will not significantly increase fire suppression costs.

In the very unlikely event that a fire were to occur as a result of a release from the pipeline, as discussed in detail above, the pipeline operator would take an active role in the emergency response in coordination with the local fire response personnel. The first step the pipeline operator would take would be to shut off the gas to eliminate the fuel source. Therefore, within forested areas, the local fire personnel would take on fire suppression and control duties similar to conventional forest fire situations. Local fire departments within forested areas are already trained and equipped to fight forest fires using conventional techniques and equipment. Therefore, the presence of the pipeline will not require the local fire departments to purchase any new or specialized equipment. Nor will the presence of the pipeline require local fire departments to hire additional personnel.

For the reasons set forth above, the PCGP will not significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.

C. All uses must comply with section 4.8.600, Section 4.8.700 and Section 4.8.750.

As demonstrated below, the PCGP will comply with all applicable provisions of Section 4.8.600, 4.8.700, and 4.8.750.

Section 4.8.600 Mandatory Siting Standards Required for Dwellings and Structures in the Forest Zone

The following siting criteria shall apply to all dwellings, including replacement dwellings, and structures in the Forest and Forest Mixed Use zones.

As detailed in the EFU section above, the pipeline is not a “structure” as that term is defined is defined in Section 2.1.200 because the pipeline will be located under, rather than on the land which it crosses. Consequently, the siting standards at Section 4.8.600 are not applicable to the subsurface pipeline or block valves.
Section 4.8.750 Development Standards

All development and structures approved pursuant to Article 4.8 shall be sited in accordance with this Section.

E. Fences, Hedges and Walls: No requirement, except for vision clearance provisions in Section 3.3.400 and Fire Siting and Safety Standards in Section 4.7.700.

The pipeline is not a hedge, fence or wall, and therefore this standard does not apply to the pipeline itself. Each block valve will be surrounded by a security fence seven feet in height that will enclose a secured area for each block valve within the permanent right-of-way. (See photo of typical block valve at Exhibit 4). The block valve fences will not be located at an intersection and therefore, the vision clearance provisions are inapplicable. As discussed above the fire siting standards are either satisfied or inapplicable.

For the reasons set forth above, the PCGP is allowed as a conditional use within the F zone.

3. Rural Residential Zones

The pipelines crosses approximately 0.37 mile of private property zoned Rural Residential - 5 (RR-5), and approximately 0.10 mile of private property zoned Residential Rural - 2 (RR-2). The pipeline crosses five RR-5 zoned areas from MPs 10.15 to 10.25, 11.94 to 12.04, 12.47 to 12.49, 14.22 to 14.28, and 22.59 to 22.71. From MP's 4.17 to 4.22 and 10.12 to 10.15, the pipeline crosses property zoned RR-2. All of the RR-5 and RR-2 zoned lands crossed are private.

Within RR-5 zoned lands near MP 14.25, there are two residences within 100 feet of the construction area. There are also several structures within RR-5 zoned lands within 100 feet of the construction area. Within RR-2 zoned lands, there are no residences within 100 feet of the construction area; however, there are several structures located within 100 feet of the construction area. The structures are shown on the Environmental Alignment Sheets provided in Exhibit 1 to the application narrative.

Pacific Connector will undertake specific measures to ensure safety and mitigate impacts on residential uses and structures, including the following: (1) installation of orange safety fence between the construction right-of-way and the residence; (2) avoiding removal of trees and landscaping wherever possible; (3) restoring all lawn areas and landscaping within the construction right-of-way consistent with the requirements of FERC's upland plan; (4) maintaining access to residences at all times during construction; (5) providing alternative sewer facilities if septic systems are disturbed during construction, including repairing and restoring such systems if necessary.

Consistent with the above, the principal method for mitigating impacts to existing residential areas will be to ensure that the construction proceeds quickly through such areas (thus
minimizing exposure to nuisance effects, such as noise and dust) and limiting the hours of operations that high-decibel noise levels can be conducted. Landowners will be notified prior to construction and access and traffic flows will be maintained during construction activities, particularly for emergency vehicles. Pacific Connector has developed and will implement Landowner Complaint Resolution Procedures.

Dust minimization techniques such as watering will be used on-site and all litter and debris will be removed daily from the construction site. Pacific Connector will comply with all local noise ordinances. Pacific Connector does not currently plan to work on Sundays. However, certain activities, such as waterbody crossing construction and hydrotesting, may require a 24-hour work schedule. Pacific Connector will attempt to schedule activities during normal working hours.

After project construction, landowners affected by the project will have use of the right-of-way, provided it does not interfere with the easement rights granted to Pacific Connector for construction and operation of the pipeline system.

Mature trees, vegetation screens and landscaping will be preserved to the extent possible while ensuring the safe operation of construction equipment. Landowners will be compensated for removal of trees. Immediately after backfilling the trench and weather permitting, all lawn areas and landscaping within the construction work area will be restored. Permanent structures will not be permitted on the permanent right-of-way, including houses, tool sheds, garages, poles, guy wires, catch basins, swimming pools, trailers, leaching fields, septic tanks, or any other objects not easily removed; nor in general is grading or removal of cover allowed without Pacific Connector's involvement. Pacific Connector will compensate landowners for damage to homes if the damage is caused by pipeline construction. Depending on the specific circumstances, Pacific Connector may choose to relocate residents during construction activities. Arrangements will be determined through negotiations between the landowner and Pacific Connector's Land Representative prior to construction.

Within 50 feet of a residence, the edge of the construction work area will be fenced for a distance of 100 feet on either side to ensure that construction equipment and materials, including the spoil pile, remain within the construction work area. Fencing will be maintained, at a minimum, throughout the open trench phases of pipeline installation. Where feasible, Pacific Connector has reduced the construction right-of-way near residences and placed temporary work areas as far as practicable from the residences. Pacific Connector will also limit the period of time the trench remains open prior to backfilling.

4. Coos Bay Estuary Management Plan (CBEMP)

The application narrative submitted on April 14, 2010 provides the applicant's preliminary responses and analysis regarding the PCGP's compliance with standards, objectives and policies applicable to the various CBEMP zoning districts that the pipeline will cross through. In addition to the information and responses provided in the application narrative, the application must also demonstrate compliance with a multitude of state and federal environmental permitting
programs. Attached as Exhibit 5 to this letter is a list of the state and federal permits, approvals and consultations required by the FERC Order to be obtained prior to the construction and operation of the PCGP. These environmental permits generally require that the project avoid, minimize and mitigate project impacts to the environment during project construction and operation within the various zoning districts that the PCGP crosses in Coos County. The issuance of those permits will ensure that the construction and operation of the PCGP will not significantly impact the resource productivity and natural character of the upland and aquatic areas within the CBEMP, consistent with the various management objectives and policies applicable within the CBEMP zoning districts.

5. Floodplain Overlay Zone

The PCGP will cross through 10 areas within the Coos County Floodplain Overlay zone. As described in the application narrative and in the attached letter prepared by GeoEngineers dated January 22, 2010 (attached to this letter as Exhibit 9) the PCGP satisfies the applicable floodplain approval criteria.

Section 4.6.230. Procedural Requirements for Development within Special Flood Hazard Areas.

The following procedure and application requirements shall pertain to the following types of development:

4. Other Development. “Other development” includes mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of a special flood hazard, but does not include such uses as normal agricultural operations, fill less than 12 cubic yards, fences, road and driveway maintenance, landscaping, gardening and similar uses which are excluded from definition because it is the County’s determination that such uses are not of the type and magnitude to affect potential water surface elevations or increase the level of insurable damages.

Review and authorization of a floodplain application must be obtained from the Coos County Planning Department before “other development” may occur. Such authorization by the Planning Department shall not be issued unless it is established, based on a licensed engineer’s certification that the “other development” shall not:

A natural gas pipeline is not included in the specified list of “other development.” However, because the pipeline construction process will involve the removal and replacement of soil and recontouring activities that are similar to the listed development activities, the following demonstrates that the PCGP project is consistent with the “other development” standards.

a. result in any increase in flood levels during the occurrence of the base flood discharge if the development will occur within a designated floodway; or,
b. *result in a cumulative increase of more than one foot during the occurrence of the base flood discharge if the development will occur within a designated flood plain outside of a designated floodway.*

The attached letter from GeoEngineers was prepared by a licensed engineer. As described in that letter, the pipeline will be installed below existing grades and no permanent structures will be placed above existing grades within the FEMA 100-year floodplain. In addition, at the completion of pipeline installation all construction areas will be restored to their preconstruction grade and condition in accordance with the ECRP. Therefore, the GeoEngineers letter certifies that the completed pipeline shall not result in any increase in flood levels during occurrence of the base flood discharge within the FEMA 100-year floodplain. As described above, the FEMA 100-year floodplain includes areas that are identified as both floodways and floodplains in the CCZLDO. Therefore, this certification is more conservative than required under this standard.

Section 4.6.235. Sites within Special Flood Hazard Areas.

1. *If a proposed building site is in a special flood hazard area, all new construction and substantial improvements (including placement of prefabricated buildings and mobile homes), otherwise permitted by this Ordinance, shall:*  

As discussed above, in order to be as conservative as possible, the GeoEngineers letter assumes that any area within the FEMA 100-year floodplain is consider a floodway, which pursuant to CCZLDO § 4.6.265 are synonymous with “special flood hazard areas.” Therefore, all new construction associated with the PCGP project satisfies the following special flood hazard area criteria.

a. be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA “Manufactured Home Installation in Flood Hazard Areas” guidebook for additional techniques);

As described in the attached GeoEngineers letter, the steel pipeline will be installed below grade with a minimum cover of 3 to 5 feet or deeper if it is deemed to be necessary based upon a site-specific stream scour analysis. In locations of free or high water table, pipeline buoyancy will be mitigated using a variety of methods, including increased pipe wall thickness, increased pipeline depth, concrete weight coating, set-on concrete weights, bolt on weights, articulating concrete mattresses, bag set on weights, or screw anchors. The risk of pipeline collapse will be mitigated with the use of increased pipe wall thickness where necessary. Lateral movement and flood damage will also be mitigated by a variety of techniques, including increased pipeline depth, additional wall thickness, concrete coating or screw anchors. The report explains that the exact method in any given floodplain area will be determined based upon a site-specific analysis of the topography and water body. The report concludes that the described installation methods and
mitigation measures will avoid and/or minimize flotation, collapse, or lateral movement hazards and flood damage.

b. be constructed with materials and utility equipment resistant to flood damage;

As described in the attached GeoEngineers letter, the entire pipeline will be constructed with corrosion-protected steel pipe. Where deemed necessary, the pipeline will be installed with a reinforced concrete coating to protect against abrasion and flood damage.

c. be constructed by methods and practices that minimize flood damage; and

As described in the GeoEngineers letter, the pipeline will be installed below grade with a minimum cover of three to five feet, and may be installed deeper if a site specific stream scour analysis indicates that a deeper pipeline depth is necessary in a specific location. The construction methods to mitigate flotation, collapse, and lateral movement hazards are discussed under subsection (a) above and in detail in the attached GeoEngineers letter. As the letter concludes, with the implementation of the identified construction techniques, the pipeline will be constructed by methods and practices that minimize flood damage.

d. electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

The subsurface pipeline does not include electrical, heating, ventilation, plumbing, or air conditioning components. Therefore, this criterion is not applicable.

Thank you for the opportunity to provide additional evidence in support of the PCGP consolidated land use applications. We look forward to answering any further questions in advance of a favorable staff report.

WILLIAMS PACIFIC CONNECTOR GAS OPERATOR, LLC

Rodney Gregory

Derrick Welling

EXHIBIT A
10.6.2 Brunschmid Wetland Reserve Program Easement Avoidance
Alternatives

Between approximate MPs 10.42R and 10.78R, the 2009 FEIS Route crossed through the U.S. Department of Agriculture, Natural Resources Conservation Service’s (NRCS') Brunschmid Wetland Reserve Program (WRP) easement. In an August 30, 2012 scoping letter to FERC, the NRCS indicated that the major concern regarding the PCGP Project was the potential negative impacts to the operation and function of the 13.41 acres enrolled in the permanent conservation easement at the Brunschmid WRP. In their letter the NRCS stated that their policy regarding WRP easements is that all proposed projects seek to avoid these easements.

During the week of September 13, 2012, Pacific Connector met onsite with NRCS representatives Evelyn Conrad/Roseburg Service Center and Pat Jones/Coquille Field Office, as well as Jon Souder with the Coos Watershed Association which helped restore the Brunschmid WRP easement. The intent of the onsite meeting was to review the WRP easement and discuss the NRCS easement policy in relation to the PCGP proposed alignment and routing history in the area, which included the FEIS route through the easement. Pacific Connector explained routing constraints in the area including potential encumbrances to neighboring landowners/residences and discussed the possibility of mitigating the Project’s effects to the easement versus a reroute. During the meeting Pacific Connector indicated that they would review potential routing alternatives to avoid the easement, but expressed their concern that additional landowner effects would result in any alternative that avoided the easement.

Figure 10.6-2 shows two alternatives that Pacific Connector identified to avoid the Brunschmid WRP easement. Although other alternatives were initially considered, Pacific Connector dropped them because of additional residential effects and constructability issues. Because access was denied on abutting properties, alternative route review was confined to public roads, review of USGS topographic maps, aerial photography, and aerial review. Although WRP Alternative 1 involves the fewest changes to the proposed route, this route would directly affect a bald eagle nest noted in the Oregon Biodiversity Information Center (ORBIC) data. The presence of the nest was confirmed during aerial reviews by Pacific Connector in October 2012.

The proposed route is similar to the Landowner Amended Alternative shown on Figure 10.6-3 which was suggested by Fred Messerle & Sons, Inc. in a December 1, 2008 letter to FERC on the Draft EIS; the Coos Watershed Association also supported this alternative in their December 4, 2008 letter commenting on the Draft EIS. The proposed route avoids potential geologic hazards and facilitates an HDD crossing of the Coos River.

Geotechnical borings have been completed along the proposed route, which confirmed the feasibility of an HDD of the Coos River (see Appendix 2G to Resource Report 2). The HDD feasibility evaluation for the 2009 FEIS Route is provided in Appendix 10A. Table 10.6-2 provides an alternative comparison between the proposed route, WRP Alternative 1, and the 2009 FEIS Route. Appendix 10G provides a geologic hazard evaluation of these alternatives.

Exhibit B-1
<table>
<thead>
<tr>
<th>Alternatives Analysis</th>
<th>2009 FEIS Route (MPs)</th>
<th>WRP Avoidance Alternative 1</th>
<th>Proposed Route (Environmentally Preferred)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (miles)</td>
<td>2.85</td>
<td>2.80</td>
<td>2.97</td>
</tr>
<tr>
<td>Construction right-of-way (acres)</td>
<td>31.34</td>
<td>30.81</td>
<td>32.92</td>
</tr>
<tr>
<td>Temporary extra work areas (TEWA) (acres)</td>
<td>23.00</td>
<td>18.27</td>
<td>18.88</td>
</tr>
<tr>
<td>Permanent Easement (acres)</td>
<td>17.72</td>
<td>16.97</td>
<td>18.00</td>
</tr>
<tr>
<td>Number of Landowner Parcels Crossed (all private)</td>
<td>14</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Number of residences within 50 feet of construction right-of-way</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of waterbodies crossed</td>
<td>8&lt;sup&gt;a&lt;/sup&gt; Coos River and 1-ditch to be HDD'd</td>
<td>7&lt;sup&gt;3&lt;/sup&gt; Coos River and 1-ditch to be HDD'd</td>
<td>7&lt;sup&gt;3&lt;/sup&gt; Coos River to be HDD'd</td>
</tr>
<tr>
<td>Length of waterbody crossings (feet)</td>
<td>763&lt;sup&gt;4&lt;/sup&gt;</td>
<td>754&lt;sup&gt;3&lt;/sup&gt;</td>
<td>756&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Number of wetlands crossed</td>
<td>6&lt;sup&gt;a&lt;/sup&gt;</td>
<td>6&lt;sup&gt;5&lt;/sup&gt;</td>
<td>3&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>Length of wetland crossings (feet)</td>
<td>5,902&lt;sup&gt;4&lt;/sup&gt;</td>
<td>4,417&lt;sup&gt;5&lt;/sup&gt;</td>
<td>6,687&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>Agricultural lands affected (miles)</td>
<td>0.33&lt;sup&gt;6&lt;/sup&gt;</td>
<td>0.33&lt;sup&gt;6&lt;/sup&gt;</td>
<td>1.19&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
<tr>
<td>Evergreen Forest (acres construction right-of-way)</td>
<td>3.81</td>
<td>7.67</td>
<td>13.66</td>
</tr>
<tr>
<td>Regenerating forest clearing (acres construction right-of-way)</td>
<td>7.16</td>
<td>7.49</td>
<td>14.66</td>
</tr>
<tr>
<td>Habitat for threatened or endangered species</td>
<td>Coos River Southern DPS Green Sturgeon River - HDD</td>
<td>Directly affects Known bald eagle nest&lt;sup&gt;8&lt;/sup&gt; Coos River Southern DPS Green Sturgeon River - HDD</td>
<td>Coos River Southern DPS Green Sturgeon River - HDD</td>
</tr>
<tr>
<td>Number of previously recorded cultural resources</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of newly identified cultural resources&lt;sup&gt;9&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miles of right-of-way parallel or adjacent to existing rights-of-way (percent of alternative length)</td>
<td>0.84 (29.5 percent)</td>
<td>0.76 (27.1 percent)</td>
<td>0.50 (17.2 percent)</td>
</tr>
</tbody>
</table>

<sup>1</sup> Mileage length cannot be calculated by subtracting milepost ranges because of engineering station equations included in route segment between MPs 9.41R to 12.39R.

<sup>2</sup> Acres of permanent easement calculated based on crossing length on private and federal timber lands. Pacific Connector proposes a 50-foot permanent easement on federal lands and a 50-foot permanent easement on private timber lands.

<sup>3</sup> From aerial photo review and review of Pacific Northwest Hydrography Framework Clearinghouse data layers (http://hydro.epa.gov/).

<sup>4</sup> Based on field surveys (see Table 2A-3 in Appendix 2A to Resource Report 2). Note, some waterbody crossing lengths are included in the wetland crossings length (waterbody/ditches not separated out of extensive wetlands).

<sup>5</sup> Based on NVII mapping. Waterbodies/ditches not separated out of extensive wetlands.

<sup>6</sup> Agricultural lands are associated with the Coos River Floodplain and included wetland pastures and hayfields.

<sup>7</sup> Includes recent clear-cut forests.

<sup>8</sup> ORBIC - Oregon Biodiversity Information Center Data, Institute for Natural Resources, Portland State University 2012. Nest site confirmed during PCGP October 2012 over-flight route investigation.

<sup>9</sup> Surveys incomplete.
Brunsichmid WRP Avoidance Photos

Photo 1. Proposed Alternative Route on south side of Coos River, zoning (EFU & 20-RS) boundarys do not differ in landuses. Proposed alingment routeed based on physical conditions on the ground (adequate set back of the river to facilitate HDD, waterbody crossings such as Vogel Creek and intersecting location of the Proposed Route.)
Photo 2. Preliminary Brunschmid WRP Easement Alternatives
Photo 3 and 4 (See Photo 2 & 5 for notes)
Photo 5. Although the 2009 FEIS Route and the WRP1 Avoidance Alternative cross less wetlands than the Proposed Route, these alternatives cross more wet tidal marsh shown in these photos.
LiDAR Image (see Photo 2 Notes)
<table>
<thead>
<tr>
<th>Minor Route Deviation</th>
<th>County</th>
<th>Rationale for Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Slough MPs 9.68 and 10.33</td>
<td>Coos</td>
<td>The Proposed Route has been slightly modified between MPs 9.68 and 10.33 from Pacific Connector's 2009 FEIS route. The route modification avoids crossing Stock Slough Road (County Road 54) in a steep road cut as the alignment descends a steep ridge slope. Further, the route modification avoids two crossing of Stock Slough in the tight meandering bends which were crossed immediately below Stock Slough Road and immediately adjacent to a residence.</td>
</tr>
</tbody>
</table>
Stock Slough Photo 1: Cutslope avoided by realignment of Stock Slough Reroute.

Stock Slough Photo 2: Two meanders of Stock Slough avoided by reroute. Proposed alignment routed in pasture on opposite side of second meander crossing (middle ground of photo). Photo taken from edge of County Road. Previous alignment abruptly sloped down from the road to Stock Slough where there was little working room between the slope/slough crossing.
Stock Slough Photo 3: (See caption for Photo 2)

Stock Slough Photo 4: Helicopter Photo of Stock Slough. Note: two tight meanders of Stock Slough avoided by reroute. Note: no working room between county road and the crossing of Stock Slough.
Stock Slough Photo 5. Note: blue roofed structures, two meanders of Stock Slough, and county road crossing area avoided by reroute.
Groundwater Supply Monitoring and Mitigation Plan

Pacific Connector Gas Pipeline Project

June 2013
# Table of Contents

1.1 Introduction ........................................................................................................... 1  
1.1.1 Phase I – Identification of Groundwater Supplies ........................................ 1  
1.2.1 Phase II – Determination of Susceptibility ...................................................... 2  
1.3.1 Phase III – Monitoring ................................................................................... 2  
1.3.3 Monitoring Schedule ...................................................................................... 3  
2.1 Measures to Prevent Impacts to Groundwater Resources .................................. 3  
3.1 Mitigation for Wells Impacted by Construction .................................................... 4
1.1 INTRODUCTION

The purpose of this Groundwater Supply Monitoring and Mitigation Plan is to discuss the potential susceptibility of impacts to groundwater supplies and to identify monitoring and mitigation measures to prevent and/or minimize impacts. This plan includes the procedures for identification of groundwater supplies using available agency databases and field verification and describes the monitoring procedures.

1.1.1 Phase I – Identification of Groundwater Supplies

Initial identification of groundwater supplies within and adjacent to the proposed pipeline construction disturbance is complete. There are no public groundwater supply wells or springs within 400 feet of the proposed construction disturbance according to the Oregon Department of Environmental Quality (ODEQ) Drinking Water Protection database which includes public drinking water source areas for both groundwater and surface water (ODEQ, 2013a). This database includes only those groundwater supplies that are included in the federal definition of a public drinking water system (see Resource Report 2). The Oregon Department of Water Resources (ODWR) water rights database (ODWR, 2013b) was also reviewed for other groundwater wells and springs that are within 200 feet of the proposed construction disturbance. These groundwater supplies are listed in Table 2.4-2 in Resource Report 2 and include only those for which a water right has been obtained.

There are several types of groundwater wells in Oregon that are exempt from obtaining any kind of permit, and are therefore not registered or identified in a state database. These include wells for single or group domestic purposes not exceeding 15,000 gallons per day. Pacific Connector will attempt to identify any unregistered wells in the vicinity of the construction right-of-way during the easement acquisition process with individual landowners prior to construction. Pacific Connector will supply landowners with documentation that explains the pipeline construction project and outlines the field investigation for identification of groundwater supplies. During the easement acquisition process, landowners will be requested to identify groundwater supply wells, springs, and seeps located on their property. Springs and seeps identified during wetland delineation surveys are included in Table 2A-3 in Appendix 2A to Resource Report 2. Final identification and confirmation of the location of groundwater supplies will be conducted through field investigations and contacts with landowners within and adjacent to the proposed pipeline right-of-way prior to construction. Landowners will be supplied with documentation that explains the proposed pipeline construction project and outlines the field investigation for identification of groundwater supplies. During the field investigation, landowners will be requested to identify groundwater supply wells, springs, and seeps located on their property. Landowners will also be asked to identify the use of the water (i.e., municipal, irrigation, industrial, livestock, or other).
1.2.1 Phase II – Determination of Susceptibility

During the field investigation to identify groundwater supply sources, landowners will be advised that preconstruction monitoring of identified groundwater supply sources is recommended to establish baseline water quality and yield, if applicable. Landowners will be requested to give permission for Pacific Connector to conduct the testing.

Public groundwater supply wells and springs within 400 feet of the proposed construction disturbance are considered to be potentially susceptible to impacts; however, none have been identified (ODEQ, 2013a). All other groundwater wells, springs, and seeps within 200 feet of the proposed construction disturbance will be considered potentially susceptible to impacts from pipeline construction and will be included in the monitoring program.

During construction, landowners with groundwater supplies located outside of the 200-foot monitoring area may request pre and/or post-construction water sampling. In these cases, sampling would follow the same schedule and methods described for groundwater supplies within the 200-foot monitoring area.

1.3.1 Phase III – Monitoring

a) Groundwater Supply Wells

Landowners will be asked to agree to testing and sampling of their groundwater supply wells which will include pump testing for yield and sampling for water quality. The landowner will be asked to sign a monitoring agreement either agreeing to the monitoring or declining the monitoring. The monitoring agreement will acknowledge that should a landowner decline the monitoring, it does not prejudice their right to pursue claims against actual damages and advises that the burden of proof of damage will lie with the owner of the well. Preconstruction monitoring of the well may be implemented upon initial contact if the owner is agreeable, or the owner will be notified later of the proposed preconstruction monitoring schedule and will be asked to negotiate adjustments to the schedule where necessary.

Well monitoring personnel will abide by the requests of landowners with regard to scheduling, test methods, and minimizing disturbance to wells, except that the monitoring should satisfy the requirements where possible. The condition of the well will be evaluated prior to monitoring to determine if monitoring can be carried out without damage to the existing well. In the event that a well cannot practically be monitored within the required schedule, a contingency agreement with the well owner will be negotiated. Prior to construction, wells will be tested for water yield and sampled for water quality which if necessary, will allow for later determination of damage caused by pipeline construction.

The owner will be asked to provide preliminary well performance data that will be used to determine which hydraulic testing technique is applicable. Water levels will be measured with an electric sounder. Generally, yield in gallons per minute (gpm) will be calculated using a container of known volume and a timer. Yield will be calculated by dividing the collected volume in gallons by the time in minutes required to fill the vessel.

During testing, the following will be recorded: date and time, location, weather (if outside), water level, flow rate, horsepower of existing pump and number of samples taken. Field
measurements will be taken and recorded for water level and flow rate and for the following parameters: temperature, pH, turbidity, and specific conductance. Water samples will be taken and sent to the laboratory to be analyzed for TPH, fecal coliform, and nitrate.

b) Springs and Seeps

The field identification program will include interviews with landowners to determine locations of springs and seeps within 200 feet of the proposed construction disturbance. For each spring or seep, the following data will be recorded: date and time, location, weather, proximity to other sources and presence of barriers, number of samples taken, and other pertinent information (i.e., fisheries significance). Field measurements will be taken and recorded for flow, temperature, turbidity, pH, and specific conductance. Water samples will be taken and sent to the laboratory to be analyzed for TPH, fecal coliform, and nitrate.

Monitoring will be repeated after pipeline construction where there is doubt as to whether apparent variation, such as diminished flow, is due to construction impacts or to seasonal effects; follow-up surveys may be recommended during the appropriate season.

1.3.3.1 Sampling and Analysis Methods

Water samples will be collected through the normal supply discharge point (well, spring, or seep). Sampling methods will adhere to the prevailing EPA and state sampling and analytical procedures in place at the time of construction. All samples will be collected and properly preserved and delivered to the laboratory with proper chain of custody information.

1.3.3.3 Monitoring Schedule

Monitoring (including yield testing and water quality sampling) will be conducted prior to pipeline construction, subject to landowner approval, to obtain baseline yield and water quality data for each groundwater supply identified. Upon completion of preconstruction monitoring, the landowner will be provided with a point of contact with Pacific Connector in order to report potential problems with wells, springs, and seeps believed to be the result of construction.

Pacific Connector will conduct post-construction sampling if requested by the landowner or in disputed situations to determine the effects of construction, if any, on the groundwater supply. Monitoring locations, testing and sampling methods, and analytical procedures for post-construction monitoring will be consistent with that of the preconstruction sampling.

2.1 MEASURES TO PREVENT IMPACTS TO GROUNDWATER RESOURCES

Trench excavation will generally range from about 8 to 10 feet in depth, which is typically too shallow to have a direct impact on the major aquifer systems underlying the proposed construction disturbance.

Pacific Connector has prepared a Spill Prevention, Containment, and Countermeasures (SPCC) Plan that outlines proper storage, containment, and handling procedures to prevent the inadvertent release of fuels, solvents, or lubricants used during construction. The SPCC
Plan also describes measures to be implemented by company personnel and contractors to prevent and control inadvertent spills of materials.

An analysis of potential blasting locations is described in Section 6.6 of Resource Report 6 and indicates that blasting may be required during pipeline installation. Where blasting may be necessary, Pacific Connector will prepare blasting plans prior to construction that are specific to the area in order to minimize potential impacts. The blasting contractor will conduct appropriate preconstruction investigations, as needed, and develop specific blasting operation and monitoring plans to address site variables (soil and rock types, etc.) and would incorporate locations of existing groundwater wells, springs, and seeps. These investigations would allow for limits to be set on blast peak particle velocity to levels that would protect groundwater wells, springs, and seeps and other nearby structures from any structural damage.

3.1 MITIGATION FOR WELLS IMPACTED BY CONSTRUCTION

Should it be determined after construction that there has been an impact on groundwater supply (either yield or quality), Pacific Connector will work with the landowner to ensure a temporary supply of water, and if determined necessary, Pacific Connector will replace a permanent water supply. Mitigation measures will be coordinated with the individual landowner in order to meet the landowner’s specific needs. Mitigation measures for groundwater wells, springs, and seeps will be specific to each property and would be determined during landowner negotiations.

Within 30 days of placing project facilities in-service, Pacific Connector will file a report with FERC regarding landowner complaints received and the remedial action taken to address the complaint.
References


Pacific Connector Gas Pipeline, LP

Reliability and Safety

Pacific Connector Gas Pipeline Project

June 2013
Table of Contents

1.0 introduction .............................................................................................................. 1
1.1 Hazards ....................................................................................................................... 2
1.2 Safety Standards for Pipelines .................................................................................. 3
1.3 Safety Standards for aboveground facilities .............................................................. 5
1.4 Integrity Management Program .................................................................................. 6
1.5 Pipeline Safety Monitoring Program ......................................................................... 7
1.6 Public Education Program ........................................................................................ 9

List of Tables

Table 1.4-1 Class 3 or Greater Locations along the PCGP Route ....................................... 6

List of Abbreviations

API American Petroleum Institute
CFR Code of Federal Regulations
CP Cathodic Protection
DOT Department of Transportation
EPCM Engineering, Procurement, and Construction Management
FERC Federal Energy Regulatory Commission
HCA High Consequence Area
IMP Integrity Management Program
MP Milepost
O&M Operations and Maintenance
PCGP Pacific Connector Gas Pipeline
RP Recommended Practice
SCADA Supervisory Control and Data Acquisition
RELIABILITY AND SAFETY

1.0 INTRODUCTION

Pacific Connector Gas Pipeline, LP (Pacific Connector) proposes to construct and operate the Pacific Connector Gas Pipeline (PCGP) Project, a new 231.82-mile, 36-inch diameter interstate natural gas transmission system and related facilities.

The design, construction, operation, and maintenance of interstate natural gas pipelines, including the Pacific Connector Gas Pipeline (PCGP) Project, are regulated by federal agencies, including the U.S. Department of Transportation (DOT) (49 Code of Federal Regulations [CFR] Part 192 - http://ecfr.gpoaccess.gov) through the Office of Pipeline Safety (OPS) and the Federal Energy Regulatory Commission (FERC). These regulations contribute to improved processes and safety standards and greatly reduce hazards and impacts associated with the construction and operation of gas transmission facilities. These minimum safety standards, together with advances in pipeline manufacturing, protective coatings, construction, inspection techniques and more mature and robust integrity management programs minimize the potential for pipeline failure.

The proposed pipeline and aboveground facilities associated with the PCGP Project will be designed, constructed, operated, and maintained to meet or exceed the DOT Safety Standards under 49 CFR Part 192 and Williams Pacific Operators’ standards and specifications. Examples of Pacific Connector’s requirements that exceed Part 192 include:

- 100% non-destructive inspection of mainline welds whereas 49 CFR 192 requires only 10% of the welds be nondestructively tested in Class 1 locations;
- A minimum of 36 inches of cover in non-rock areas which includes cultivated land, marshes, lakes, and ponds and a minimum of 60 inches of cover at road drainage ditches, railroads, stream and waterbody crossings, and improved roadways. DOT 49 CFR Part 192 dictates that pipelines constructed on land in Class 1 locations must be installed with a minimum depth of cover of 30 inches in normal soil and 18 inches in consolidated rock. Pacific Connector will exceed this requirement and install the pipeline with at least 36 inches of cover in Class 1 locations with normal soils and at least 24 inches of cover in consolidated rock areas.

The DOT regulations are intended to ensure adequate protection for the public and to prevent natural gas pipeline incidents and failures. DOT 49 CFR Part 192 specifies: material selection and qualifications; minimum design requirements; the frequency of operating and maintenance activities; and protection from internal, external, and atmospheric corrosion.
1.1 HAZARDS

The transportation of natural gas by pipeline could involve some risk to the public in the event of an incident and subsequent release of gas. The primary component of natural gas in interstate transmission pipelines is methane, a colorless, odorless, and tasteless gas. While not chemically toxic, methane is classified as an asphyxiant with a slight inhalation hazard. Exposure to high concentrations can result in serious injury or death due to oxygen deficiency. The specific gravity of methane in air is 0.55, which is lighter than air. As a result, methane rises and disperses rapidly in the atmosphere.

In general, unconfined mixtures of methane in air are not flammable/explosive because of the dilution of the methane by air. Mixtures of methane in air are flammable at concentrations between 4.0 and 16.0 percent methane by volume. Methane has an ignition temperature above 1,000°F.

Potential impacts on public safety from the transportation of natural gas through pipelines have historically been related to leaks or line breaks due to material defects, corrosion or due to external forces not associated with pipeline operations. External forces affecting pipelines may include: seismic forces, damage from third-party digging near buried pipeline sections, geotechnical hazards, hydraulic hazards, and other natural occurrences.

Risks associated with third party damage can be managed with proper signage, monitoring, and landowner education programs. In addition, excavation of any type by a landowner or third party must utilize the nationwide 811 One-Call System to notify Williams Pacific Operator prior to the commencement of any such activity.

Forest fires are not considered a direct threat to underground pipelines due to the insulating effects of soil cover over the pipeline. Soil is a poor conductor of heat with thermal conductivity values ranging from 0.44 – 1.44 BTU/FT-hr-deg F. The heat capacity of most soils is 0.20 – 0.25 BTU/LB-deg F. Because soil is such a poor conductor of heat, most vegetation below grade typically stays viable after the forest fire has ceased. The pipeline will be buried at depths below surface vegetation level.

A study completed in 1993 by Lloyd W. Swift Et. Al. monitored flame and surface temperatures of three prescribed burns in Macon County, North Carolina. In the most severe cases, fire temperatures approached 1,500 deg F. During this burn, soil temperature was recorded as 113 deg F at a depth of approximately 2.5 in. (Swift, L.W. Jr., Elliot, K.J., Ottmar, R.D., and Vihnanek, R.E. 1993, Site preparation burning to improve southern Appalachian pine-hardwood stands: Fire characteristics and soil erosion, moisture, and temperature). While the specific fuel, climate, geographic, and geologic parameters vary from those expected near the PCGP Project area, the study illustrates the order of magnitude a potential fire may have on subsurface temperature conditions.

DOT 49 CFR Part 192 provides temperature de-rating factors if a pipeline is to be operated at elevated temperatures. De-rating is not applicable to pipelines in service below 250 deg F. For a pipeline buried at a typical depth of 36 inches, the empirical data suggests the pipeline will suffer no adverse effects as a result of a wildland fire.
Burial depths greater than the minimum requirements specified in DOT 49 CFR Part 192 will not provide additional benefits or safety from the heat generated by wildland fires.

Williams Pacific Operator will impose minimal restrictions for land usage once the pipeline is in operation. However, permanent structures will not be permitted on the permanent right-of-way; including houses, tool sheds, garages, poles, guy wires, catch basins, swimming pools, trailers, leaching fields, septic tanks, or any other objects that are not easily removed. In general, digging, blading, grading or similar activities that may result in the removal of cover will not be permitted without express consent from Williams Pacific Operator.

Pacific Connector will design paved and unpaved road crossings based on potential axle loads, material, design standards, and depth of cover required as permit conditions. As the development of new roads and natural resource development occurs in the vicinity of the proposed pipeline, Williams Pacific Operator will use specific safety requirements for the analysis, design, and construction of new crossings. Specific plans for addressing new roads crossing the pipeline or natural resource development are contingent upon the specific use and will be developed at the time of a specific proposal from a landowner. Temporary crossings for light duty maintenance vehicles will not adversely affect the pipeline.

Pacific Connector has identified and evaluated known landslide and seismic hazards and has routed the pipeline to avoid these areas where possible to ensure long term stability and safety of the pipeline.

1.2 SAFETY STANDARDS FOR PIPELINES

Pacific Connector will comply with the safety standards set forth by the Office of Pipeline Safety (OPS) within the U. S. Department of Transportation and the Pipeline and Hazardous Materials Safety Administration (PHMSA). OPS is the primary federal regulatory agency responsible for ensuring the safe and reliable operation of natural gas transmission pipelines.

Specific measures are incorporated in the DOT CFR as the population density around the pipeline increases. The categories of population density are known as class location areas and are based on the number of buildings intended for human occupancy. In addition, DOT 49 CFR Part 192.5 takes into account the density and duration of public use for areas "where the pipeline lies within 100 yards (91 meters) of either a building or small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. (The days and weeks need not be consecutive.)"

DOT 49 CFR Part 192 establishes four pipeline design classification standards, based on population density in the vicinity of an existing or proposed pipeline. These class location standards provide increasingly more conservative design requirements as population density increases. The class location unit area extends 220 yards (660 feet) on either side of the centerline of any continuous 1-mile length of pipeline. The four area classifications defined verbatim by 49 CFR 192.5 are as follows:
(a) This section classifies pipeline locations for purposes of this part. The following criteria apply to classifications under this section.

(1) A "class location unit" is an onshore area that extends 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) of pipeline.

(2) Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(b) Except as provided in paragraph (c) of this section, pipeline locations are classified as follows:

(1) A Class 1 location is:
   (i) An offshore area; or
   (ii) Any class location unit that has 10 or fewer buildings intended for human occupancy.

(2) A Class 2 location is any class location unit that has more than 10 but fewer than 46 buildings intended for human occupancy.

(3) A Class 3 location is:
   (i) Any class location unit that has 46 or more buildings intended for human occupancy; or
   (ii) An area where the pipeline lies within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. (The days and weeks need not be consecutive.)

(4) A Class 4 location is any class location unit where buildings with four or more stories above ground are prevalent.

(c) The length of Class locations 2, 3, and 4 may be adjusted as follows:

(1) A Class 4 location ends 220 yards (200 meters) from the nearest building with four or more stories above ground.

(2) When a cluster of buildings intended for human occupancy requires a Class 2 or 3 location, the class location ends 220 yards (200 meters) from the nearest building in the cluster.

Class location criteria is included in calculations used to determine minimum pipe wall thickness, hydrostatic test pressures, maximum allowable operating pressure, inspection and testing of welds, and frequency of pipeline patrols and leak surveys. Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation.

Class location areas are also used to determine the maximum distance each point on the pipeline is permitted to be from a sectionalizing block valve (e.g., 10.0 miles in Class 1, 7.5 miles in Class 2, 4.0 miles in Class 3, and 2.5 miles in Class 4).

Additionally, pipelines constructed on land in Class 1 locations must be installed with a minimum depth of cover of 30 inches in normal soil and 18 inches in consolidated rock. Pacific Connector will exceed this requirement and will install the pipeline with at least 36 inches of cover in Class 1 locations with normal soils and 24 inches of cover in consolidated rock areas unless unfeasible, but no less than 18 inches. Class 2, 3, and 4 locations, as well as drainage ditches of public roads and railroad crossings, require a minimum cover of 36 inches in normal soil and 24 inches in consolidated rock.
Pipe design requirements for steel pipe are contained in Subpart C, Part 192. Section 192.105 contains a formula for the pipeline's design pressure. Sections 192.107 through 192.115 contain the components of the design formula, including yield strength, wall thickness, design factor, longitudinal joint factor, and temperature derating factor, which are adjusted according to the project design conditions, such as pipe manufacturing specifications, steel specifications, class location, and operating conditions.

1.3 SAFETY STANDARDS FOR ABOVEGROUND FACILITIES

In addition to pipeline safety standards for any pipelines within compressor stations, 49 CFR Parts 192.731 through 192.736 establish guidelines for inspections, hazardous materials storage, and monitoring at compressor stations. The proposed Klamath Compressor Station will be designed, constructed, and operated to meet or exceed all applicable specifications. All piping at the station will be manufactured in accordance with American Petroleum Institute (API) specifications and wall thickness will conform to DOT regulations contained in 49 CFR Part 192. The Klamath Compressor Station will be located on property owned or leased by Pacific Connector and will be enclosed by a 7-foot high chain-link security fence topped with three strands of barbed wire to maintain the security of the facility. A controlled access system will be installed to restrict access to authorized personnel only. The compressor building will be ventilated to minimize the potential for gas accumulation in enclosed areas and will be constructed of noncombustible material.

The Klamath Compressor Station will also be equipped with automatic emergency detection and shut down systems. For example, the station will have hazardous gas and fire detection systems, and an emergency shut down system. These safety and emergency systems will be tested routinely to ensure they are operating properly. The emergency shut down system will be designed to shut down and isolate elements of the compressor station in the event of a fire, before the development of a flammable mixture of gas could occur. The system will include sensors for detecting natural gas concentrations as well as ultraviolet sensors for detecting flames. Additionally, the compressor station equipment will be designed to shut down automatically if a mechanical failure poses risk to the equipment or otherwise constitutes a hazard. The compressor station will be equipped with relief valves to protect the piping from overpressurization.

Personnel will be able to respond to a compressor station emergency in 60 minutes or less during non-scheduled work hours and within a few minutes if they are at the compressor station. Personnel will be on call at all times, 24 hours a day, 365 days a year to respond to emergencies. Emergencies while the compressor station is unattended will be monitored remotely via Williams Pacific Operator's Gas Control Facility in Salt Lake City, Utah. Personnel living within a 30 minute travel time of the compressor station will be dispatched by Gas Control in the event of an emergency at the compressor station.

Personnel will be Operator Qualified per DOT PHMSA requirements for operational and emergency situations at the station. Fire protection, first aid, and safety equipment will be maintained at the compressor station and Williams Pacific Operator personnel will be trained in first aid and proper equipment use.
All aboveground meter station perimeters will be enclosed by 7-foot high chain-link security fences topped with three strands of barbed wire. All gates and access points will remain locked to prevent unauthorized access. All facilities will be operated and maintained in accordance with all applicable regulations. Remote actuated shutoff valves will be installed at the Klamath Compressor Station and the Jordan Cove Meter Station.

1.4 INTEGRITY MANAGEMENT PROGRAM

Williams Pacific Operator will develop an enhanced pipeline integrity Management Program (IMP) to maintain and improve pipeline safety and reliability for the entire PCGP system. The program will be implemented through:

- integrity assessment of pipelines in High Consequence Areas (HCAs);
- improving integrity management data systems;
- increasing the integrity and reliability of the pipeline system, and;
- providing increased public assurance of pipeline safety.

This IMP program is audited by the DOT. The IMP will be developed and implemented to comply with the prescriptive based requirements of Subpart O, 49 CFR 192, and Williams Pacific Operator will monitor the program’s effectiveness and strive for continuous improvement. The IMP will be updated during operation of the proposed PCGP.

Williams Pacific Operator will complete the HCA determination within one year of the in-service date of the PCGP Project. HCA locations are not used for route selection or alternatives determinations, nor do they impact pipe material selection. The level of safety, integrity, and reliability of the PCGP system is equivalent whether or not the pipeline traverses an HCA.

Based on aerial photography analysis of the proposed route, Pacific Connector has identified two areas that could qualify as Class 3 locations (see Table 1.4-1).

<table>
<thead>
<tr>
<th>Class 3 or Greater Locations along the PCGP Route</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>3</td>
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</table>

**Cathodic Protection.** A low voltage cathodic protection (CP) system will be installed to assist in protecting the buried pipeline from corrosion. The CP system functions by using rectifiers and/or groundbeds to impress a DC current of approximately 1 Volt on the pipeline. This current provides protection from corrosion by making the pipeline cathodic to the surrounding environment. All rectifiers and electrical equipment are enclosed inside locked metal boxes. Furthermore, properly applied and maintained external pipeline coating serves as a barrier against the formation of corrosion products and greatly reduces the requirements of the CP system. Although existing soil surveys may indicate whether or not a corrosive environment may be present, the CP system design requires an assessment of actual pipe to soil potentials. Such potentials cannot
be accurately approximated until the pipe is in the ground and the electrical interaction with the surrounding environment can be measured. At least one year will be required before CP system design and location parameters can be finalized.

Williams Pacific Operator will assess cathodic protection requirements and will install ground-beds and rectifiers at least one year following final pipeline installation. The assessment process will consist of close interval survey, soil resistivity readings, and plotting and graphing the results to show low potential areas. This information will be used to determine the design requirements and locations of anode-beds and rectifiers. This work will be completed by qualified consultants selected by Williams Pacific Operator.

Following the installation and balancing of the CP system, Williams Pacific Operator personnel will routinely check the voltage and amperage of the rectifiers, as well as the pipe-to-soil potentials. Continual adjustments will be made as conditions change. In addition to maintenance activities, annual close interval surveys will be completed to determine pipe to soil potentials in accordance with DOT requirements.

Williams Pacific Operator will consult with federal, state, and local agencies regarding permitting of the CP system following the completion of pipeline construction. The installation of the CP system on the Pacific Connector is exempt from section 7(c) of the Natural Gas Act and would be permitted in accordance with 18 CFR Part 2.55(a). Auxiliary installations as considered by the Federal Energy Regulatory Commission (FERC) for obtaining more efficient or more economical operation of an authorized transmission facility. Prior approval from FERC is not required under 18 CFR 2.55(a)(2)(i), therefore, CP system design requirements and permitting should not be integrated as an action to the proposed transmission facility under this regulation.

1.5 PIPELINE SAFETY MONITORING PROGRAM

The first step in Pacific Connector's pipeline safety monitoring process is to make sure that the pipeline is constructed properly.

During construction, the integrity of coatings designed to protect against corrosion are checked and imperfections are immediately repaired. Pacific Connector will require non-destructive testing (i.e., x-ray inspection) of 100 percent of the welds in the pipeline. In addition, the pipeline will be strength tested to a pressure of up to 1.5 times the maximum allowable operating pressure depending on class location prior to being placed into service.

Once the pipeline is in the ground and in service, Williams Pacific Operator will implement a number of routine monitoring measures including:

- Performing land patrols which involve observing surface conditions on and near the transmission line right-of-way for indications of leaks, construction activity, and any other factors which might affect safety and operation. The term "patrolling" means the action of moving about over land or in the air or water for purposes of observing conditions on and adjacent to pipeline right-of-way for leaks, construction activity, facility marking, atmospheric corrosion, and other factors affecting safety and operations:
• Performing aerial patrols at least once per calendar year depending on class location;
• Inspecting river crossings;
• Ensuring that class location survey is current, and;
• Conducting leak surveys at least once every calendar year as required by DOT CFR 49 Part 192.

In addition to routine monitoring, potentially affected portions of the pipeline will be inspected during or immediately following any major natural disturbance events, such as an earthquake, floods, wildfires, etc. Williams Pacific Operator will access the right-of-way by foot, truck, ATV, snow mobile, snow cat, or by aircraft depending on the accessibility of the area to be monitored.

During inspections, Williams Pacific Operator employees will look for signs of unusual activity or indications on the right-of-way. Discoloration of plants or grasses may be indicative of a small leak. Any missing or damaged pipeline markers used to identify the location of the pipeline will be promptly replaced or repaired. Any evidence of unauthorized activity will be reported and investigated. Additional testing will be conducted to verify the effectiveness of CP systems.

In addition to DOT-required surveys, Williams Pacific Operator will monitor the pipeline system using a supervisory control and data acquisition (SCADA) system. SCADA systems are used to monitor and control facilities or equipment in industries such as telecommunications, water and waste control, energy, oil and gas refining, and transportation. A SCADA system gathers information; transfers the information back to a control center; carries out necessary analysis and control; and displays the information in a logical and organized fashion 24 hours a day, 7 days per week. The control center for the PCGP will be provided by Williams Pacific Operator and will be located in Salt Lake City, Utah. Local maintenance and operations personnel will be available 24 hours a day, 7 days per week.

**Emergency Response Capabilities.** Williams Pacific Operator will maintain 24-hour emergency response capabilities, including an emergency-only phone number, which accepts collect charges. The number will be included in informational mail-outs, posted on all pipeline markers, and provided to local emergency agencies in the vicinity of the pipeline and compressor station.

In addition, Williams Pacific Operator will develop emergency response plans for its entire system. Operations personnel will attend training for emergency response procedures and plans prior to commencing pipeline operations. Williams Pacific Operator will meet with local emergency responder groups (fire departments, police departments, federal land management agencies and other public officials) to review plans and will work with these groups to communicate the specifics about the pipeline facilities in the area and the need for emergency response. Williams Pacific Operator will also meet periodically with the groups to review the plans and revise them when necessary. If requested by local public emergency response personnel, Williams Pacific Operator will participate in any operator-simulated emergency exercises and post-exercise critiques. Williams Pacific Operator will use adequate local or contract resources to support the pipeline and facilities if an emergency occurs. The PCGP Project will not require the purchase of additional equipment or specialized equipment by
any of the various state or local emergency responders. The consultation will occur after the pipeline is constructed as part of operations outreach to local communities and service providers.

All of the information that Williams Pacific Operator gathers about its system will be used to tailor its safety and integrity management activities, so that parts of the system in the greatest need of attention receive greater scrutiny, such as residential areas or areas subject to growth and development. For example, Williams Pacific Operator will decide where and when to internally inspect the pipeline based on this information. Risk assessment of the pipeline system determines what inspection criteria are required. This may include many different types of assessment tools which provide specific types of information about the condition of the pipeline.

1.6 PUBLIC EDUCATION PROGRAM

The API Pipeline Standards Committee has developed an industry Recommended Practice (RP) for pipeline operators to use in developing public awareness programs. The RP known as RP 1162, in addition to providing information to landowners, excavators, and emergency responders, identifies the target audiences that should receive regular correspondence from the pipeline company such as: the general public, libraries, affected landowners, local public officials, media, and one-call centers. Williams Pacific Operators' public awareness program will meet the requirements of RP 1162.

Williams Pacific Operator will establish a Public Awareness Program that will be in compliance with the guidelines of RP 1162 and the Pipeline Safety Improvement Act of 2002. The program and the media used for public awareness shall be as comprehensive as necessary to reach all areas in which the operator transports gas.

Williams Pacific Operator will ensure that the Public Awareness Program enables members of the public, appropriate public officials, emergency response officials and persons engaged in excavation-related activities to recognize a gas pipeline emergency for the purpose of reporting to the operator or the appropriate emergency response organization.

Williams Pacific Operator will attempt to prevent possible damage to the pipeline caused by excavation-related activities by adhering to the following damage prevention requirements:

- General notification of the public in the vicinity of the pipeline, in addition to notification of individuals or companies engaged in excavation activities, to make them aware of how to determine the general location of underground pipelines before excavation activities are begun;

- Williams Pacific Operator shall participate in One Call systems and be responsible to mark and prevent damage to pipelines for excavation activities by;
  - Temporarily marking the buried pipeline in the excavation activity area prior to any work being done, and;
Inspection of the pipeline during excavation activities and afterwards to verify the integrity of the pipeline. Williams Pacific Operator will have personnel witness all excavations that occur on the right-of-way to verify that no damage occurs during excavations. If blasting is involved in the excavation, the inspection shall include a review of the blasting plan.

The frequency of a targeted mail program to communicate public awareness and damage prevention information to residences, businesses and places of congregation shall be a minimum of once every two years. Mailings shall occur annually if:

- Area is located in what has been designated as a High Consequence Area (HCA);
- Conditions exist that elevate the potential for third party damage, and;
- Specific local conditions exist that warrant more frequent communication.

The frequency of a targeted mail program to provide emergency responders with information shall be annually.

The frequency of information distributed to public officials shall be annually, including areas designated as High Consequence Areas (HCAs).

The frequency of a targeted mail program to local excavators and contractors shall be mailed annually.

More information about Pacific Connector and pipeline safety can be found at www.pacificconnectorgp.com.
Public Safety Response Manual

Redmond District

or
1-800-972-7733
Toll Free • 24 Hours
# Williams Gas Pipeline - West
(Northwest Pipeline Corporation)

## DISTRICT

**BUSINESS OFFICES AND KEY PERSONNEL**

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<th></th>
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*Updated: 07/09/99*

KEY_NOS.doc

EXHIBIT I
PUBLIC SAFETY RESPONSE MANUAL

This booklet is intended to provide general information about natural gas and the Northwest Pipeline Corporation (NWP) pipeline system. The information presented here will increase your understanding of NWP operations and help you in providing assistance to the general public and to NWP should unexpected conditions arise which create a concern for public safety.

GENERAL

The System: Northwest Pipeline Corporation owns and operates approximately 4,000 miles of high pressure natural gas pipeline system extending from Sumas, Washington, at the Canadian border to Ignacio, Colorado. The pipeline has the capacity to deliver nearly two billion cubic feet per day of natural gas at pressures up to 960 pounds per square inch. This compares with pressures in a distribution system of approximately 40 pounds per square inch. Flow of gas through 22-inch, 24-inch, 26-inch and 30-inch diameter mainline is maintained by 40 compressor stations located in Washington, Oregon, Idaho, Utah, Wyoming, and Colorado. All of these stations are remotely operated from our headquarters in Salt Lake City, Utah. Several other compressor stations are located on laterals extending from the mainline.

Much of the buried natural gas transmission pipeline crosses through rugged terrain. However, there are also many hundreds of miles where the pipeline passes through farmlands and subdivisions; under freeways, highways and county roads. In these areas the pipeline is well marked with signs located near road, rail and water crossings, and on most fences crossing over the pipeline right-of-way. The enclosed map(s) show the general route of the pipeline in our District, with the major above-ground facilities identified.

Some Facts About Natural Gas: Natural gas is a safe, clean, dependable fuel used in millions of homes for cooking, heating, cooling and drying and by many commercial and industrial customers.
Natural gas has an excellent safety record. However, just as in the case with fuel oil, electricity, gasoline or other energy sources, natural gas must be properly handled and requires a certain amount of caution.

Natural gas is not poisonous. However, if natural gas displaces air in an enclosed space, suffocation can occur because of lack of oxygen.

Natural gas in its pure state is odorless. The odor normally associated with gas is that of a strong odorant introduced at low concentrations to serve as a warning of the presence of gas. However in most cases, this odorant is not introduced into the gas until it enters local distribution systems. Don't trust just your nose, however, to identify a gas leak. A pipeline gas leak can be indicated by the following signs:

1. blowing sound; 2. dirt being blown into the air; 3. bubbles or water being blown into the air at a pond, creek or river; 4. fire apparently emanating from the ground, or burning above the ground; 5. vegetation turning brown on or near the right-of-way. Leaking natural gas will cause vegetation to turn brown and eventually kill it; 6. persistent odor associated with natural gas.

The most effective method used to detect natural gas is an instrument (sniffer) designed for that purpose, which is used extensively by gas companies to locate leaks.

Natural gas is about one-third lighter than air. It will not accumulate in low areas as will liquefied petroleum gas (LPG) or gasoline fumes. Instead, it will rise rapidly and be diluted in the atmosphere unless trapped by an overhead obstruction.

In order for natural gas to burn, the gas-air mixture must be at least four percent but not more than fifteen percent gas. When this condition exists, natural gas readily ignites with any source of ignition.

Natural gas is compressible; the condition in which it is carried in our pipeline. Our pipeline fully complies with federal standards for construction and operation. Pipelines can, of course, be weakened and caused to fail by outside forces, such as landslides, earthquakes, or damaged during construction activities.
Public Safety: NWP has operating procedures that are intended to aid in protecting public and employee safety, public and company property, and to control the flow of natural gas.

The following procedures are recommended when a concern for public safety is encountered along the pipeline. In every case, NWP should be notified immediately. NWP employees are trained and equipped to handle unexpected conditions at NWP facilities. Any operations of valves are to be performed by authorized personnel. Public service organizations are requested to handle the public and the property of others.

Fire: Do not try to extinguish a natural gas fire; NWP will determine the proper action to take at NWP facilities for each situation. Control of gas shall only be done by or under the direction of NWP personnel. Local fire departments should consider wetting down any nearby buildings or other combustible material to prevent the fire from spreading. NWP representatives will assist local fire department personnel in determining proper action at facilities not owned by NWP, if requested to do so.

Rupture: In the event the pipeline has ruptured for some reason but no fire exists, the area should immediately be cleared of people. Sources of ignition which may ignite the gas shall be kept away from the rupture area. Sources of ignition include, but are not limited to, such things as open fires, pilot lights and spark-generating equipment (running motors, actuated switches and internal combustion engines). No one should return to the rupture area to eliminate a source of ignition.

Bomb: An unexploded bomb should be approached and removed to a safe distance from the pipeline only by qualified explosives experts using proper equipment.

Exposed Line: If a normally-buried pipeline is exposed, notify NWP immediately.

Leak: A major leak should be treated as outlined above under "Rupture". Any suspected leak should be reported to NWP immediately, so that a course of action can be determined. In some cases, a minor leak may not be determined to pose a threat to public safety and evacuation may not be required.
IMPORTANT

Evacuation: For maximum safety to all persons in the vicinity of ruptures or other conditions described earlier, complete isolation of an area in which damage has occurred to the pipeline, whether or not fire results, is requested by NWP.

Publicity: In order to ensure accuracy, press releases and other statements to the media concerning pipeline conditions should be coordinated with authorized NWP representatives.

Your local NWP contact is listed in the Key Personnel section of this book. There are also people on duty 24 hours a day at the Operating Headquarters in Salt Lake City, telephone (800) 972-7733.

NWP's Intention is to encourage cooperative efforts between NWP personnel and public officials, so that concerns for public safety involving our natural gas pipeline(s) can be effectively addressed.

Thank you for helping Northwest Pipeline attain this goal.
MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶

SECTION I  NAME  24 HOUR EMERGENCY ASSISTANCE

PRODUCT ➤ Natural Gas
CHEMICAL/ SYNONYMS ➤ Methane, Marsh Gas, Methyl Hydride
CHEMICAL FAMILY ➤ Aliphatic Hydrocarbon
FORMULA ➤ Mixture  C.A.S. NUMBER ➤ 74-82-8

24 HOUR EMERGENCY ASSISTANCE
CHEMTEC  800-424-9300

HEALTH  1
FIRE  4
REACTIVITY  0

NFPA HAZARD RATING
LEAST      SLIGHT      MODERATE
0 ➤ 1 ➤ 2 ➤
HIGH      EXTREME
3 ➤ 4 ➤

SECTION II  PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFIC TYPE)
Use NIOSH/MSHA approved air supplied or self-contained breathing apparatus in positive pressure mode in oxygen deficient atmospheres (less than 19.5% oxygen).

ENGINEERING CONTROLS
Use standard engineering control methods (ventilation, purging, inerting, monitoring, etc.) to assure safe oxygen level (greater than 19.5% oxygen) and to reduce the atmosphere to no more than 10% of the Lower Explosive Limit (LEL).

SKIN PROTECTION
No data concerning skin exposure to methane.

EYE PROTECTION
No data found concerning the toxic effects of methane on the eye. When exposed to pressurized vessels/piping, valves, fittings, etc. appropriate eye/face protection should be used.

OTHER PROTECTIVE EQUIPMENT
When exposed to operations in noise in excess of applicable exposure criteria, use appropriate hearing protection. When performing work with a potential exposure to flash fires, wear appropriate fire protective clothing.

SECTION III  HEALTH INFORMATION

OSHA Permissible Exposure Limit (PEL)  ND(3)
ACGIH Threshold Limit Value (TLV)  ND(3)

LIST IN  IARC Monographs  NO  NTP List  NO

OSHA HEALTH HAZARD CLASSIFICATION
Flammable Gas

SYMPTOMS OF OVEREXPOSURE

ACUTE:  Aliphatic hydrocarbon gases are simple asphyxiants; high concentrations reduce available oxygen which could result in headache, nausea, dizziness, fatigue, coma and/or death.

CHRONIC:  None

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
Acute and/or chronic respiratory conditions.

TOXICITY DATA  ND

EXHIBIT I
SECTION IV
EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT:
Natural Gas has minimal effect on the eye.

SKIN CONTACT:
Natural Gas has minimal effect on the skin.

INHALATION:
Remove victim to fresh air. If breathing has stopped, perform artificial respiration. If heart has stopped, perform CPR immediately. Keep affected person warm and at rest. Seek medical attention at once.

INGESTION:
NA(4)

SECTION V
INGREDIENTS

A complex mixture of gaseous saturated aliphatic hydrocarbons existing primarily of methane with small quantities of heavier hydrocarbons.

In addition, possible traces of nitrogen, carbon dioxide, hydrogen sulfide, and where required, odorant may be present.

SARA TITLE III HAZARD CATEGORIES

- Fire
- Sudden Release or Pressure
- Reactivity

Immediate (Acute Health)
Delayed (Chronic Health)

SECTION VI
PHYSICAL DATA

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<tr>
<th>Property</th>
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<td>VAPOR PRESSURE (mmHg)</td>
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<td>SPECIFIC GRAVITY (H₂O=1)</td>
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<td>% VOLATILE BY VOLUME</td>
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</table>

APPEARANCE AND ODOR

Colorless gas that may contain odorant for detection.

EXHIBIT I
SECTION VII

STABILITY □ UNSTABLE ■ STABLE HAZARDOUS POLYMERIZATION □ MAY OCCUR ■ WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID

Readily mixes with air when released to create an explosive atmosphere. Also avoid strong oxidizing agents such as chlorine, bromide pentafluoride, oxygen, dilluoride, liquid oxygen and nitrogen trilluoride. It will spontaneously ignite when mixed with chlorine dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may release toxic oxides of carbon such as carbon dioxide, carbon monoxide and other toxic materials. Do not enter confined space without proper protective equipment, including proper respiratory protection.

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD USED
Gas

<table>
<thead>
<tr>
<th>FLAMMABLE LIMITS-% VOLUME IN AIR</th>
<th>LOWER</th>
<th>UPPER</th>
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<tr>
<td></td>
<td>5.3%(1)</td>
<td>14.0%(1)</td>
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</tbody>
</table>

EXTINGUISHING MEDIA

Stop flow of gas, CO₂, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

Stop flow of gas, cool exposed areas with water. Avoid extinguishing natural gas fires if ignition sources cannot be eliminated. Re-ignition and explosion may occur if ignition sources are not eliminated.

AUTOIGNITION TEMPERATURE

537(1) °C 999(1) °F

UNUSUAL FIRE AND EXPLOSION HAZARDS

Readily mixes with air and will produce an explosive atmosphere when concentrations are within the flammable limits.

SECTION IX

STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORING PRECAUTIONS

Do not exceed safe operating pressure of equipment designed to transport or store natural gas. Use explosion proof or intrinsically safe electrical equipment designed for the atmosphere in accordance with applicable codes, industry recommended practices, and local, state, and federal regulations. Do not smoke or use spark producing tools in area of use.

OTHER PRECAUTIONS

Extremely flammable when concentrations are within flammable limits. May be ignited by heat, sparks, or flames. Vapors may travel to source of ignition and flash back. Container may explode violently when exposed to heat or flame. Vapor explosion hazard indoors and outdoors.
OTHER REQUIREMENTS

- Report all natural gas leaks in accordance with applicable local/state/federal regulations.

SECTION XI EMERGENCY ACTION - (SPILL OR LEAK)

EMERGENCY ACTION:
- Eliminate source of fuel (i.e., close the valve on natural gas supply).
- Evacuate the general public as necessary.
- Notify appropriate fire, police and other public officials.
- Keep unnecessary people away, isolate hazard area and deny entry.
- Stay upwind.
- Ventilate closed spaces; check for gas concentrations and oxygen levels.
- Wear self-contained (positive pressure if available) breathing apparatus and full protective clothing.

SPILL/LEAK:
- Evacuate and isolate area until gas is dispersed.
- Shut off ignition sources; no flares, smoking, vehicles, or flames in hazard area.
- Stop area leak if you can do so without risk.
- Use water spray to cool adjacent structures.

FOOTNOTES:

(1) National Fire Protection Association
(2) Refers specifically to methane
(3) ND = Not Determined
(4) NA = Not Applicable

DISCLAIMER

Wherever such words or phrases as "hazard", "hazardous", "hazardous chemical", "toxic", "carcinogen", "carcinogenic", etc., appear herein they are utilized as defined or described under state employee right-to-know laws, Federal OSHA law, or the indirect sources for these laws, such as the National Institute for Occupational Safety and Health ("NIOSH"), the National Toxicology Program, etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. ANY EXPOSURE, WITHOUT EXCEPTION, CAN ONLY BE UNDERSTOOD WITHIN THE ENTIRE CONTEXT OF ITS OCCURRENCE, INCLUDING THE CHARACTERISTICS OF THE SUBSTANCE(S) WHICH ARE DESCRIBED IN THIS MATERIAL SAFETY DATA SHEET. We cannot control the conditions of use of this substance, and disclaim any liability for loss or damage incurred directly or indirectly in such use.

The above data is based on tests and experience which we believe is reliable and is supplied for information purposes only. WE ALSO DISCLAIM ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY USE WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO US.
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<td>U.S. Army Corps of Engineers</td>
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<td>Heidi Firstencel Regulatory Project Manager 541-465-6765</td>
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<td>U.S. Fish and Wildlife Service</td>
<td>ESA Section 7 Consultation</td>
<td>Doug Young Energy Program Manager 503-231-6179</td>
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<td>Fish and Wildlife Coordination Act</td>
<td><a href="mailto:doug.young@fws.gov">doug.young@fws.gov</a></td>
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<td>Oregon Fish and Wildlife Office 2600 SE 98th Ave., Ste. 100</td>
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<td>National Marine Fisheries Service</td>
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<td>Chuck Wheeler Fisheries Biologist 541-957-3379</td>
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<td>MMPA</td>
<td><a href="mailto:chuck.wheeler@noaa.gov">chuck.wheeler@noaa.gov</a></td>
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<td>USDI Bureau of Land Management</td>
<td>Right-of-Way Grant Application Plan of Development</td>
<td>Lorraine Salas National Project Manager 575-525-4388</td>
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<td>Right-of-Way Grant Record of Decision Notice to Proceed</td>
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<td>USDA Forest Service</td>
<td>Right-of-Way Grant Application Record of Decision</td>
<td>Wes Yamamoto 541-825-3150</td>
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<td><a href="mailto:wyamamoto@fs.fed.us">wyamamoto@fs.fed.us</a></td>
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<td>Settlement Agreement for Disposal of Right-of-Way Timber</td>
<td>27812 Tiller Trail Highway</td>
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<td>USDI Bureau of Reclamation</td>
<td>Right-of-Way Grant Application</td>
<td>Kristen Hiatt 541-880-2577</td>
<td>4-17-06</td>
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<td>Letter of Concurrence</td>
<td><a href="mailto:khiatt@usbr.gov">khiatt@usbr.gov</a></td>
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<td>Klamath Basin Area Office 6600 Washburn Way Klamath Falls, OR 97603</td>
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<td>Tribal</td>
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<td>Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians</td>
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<td>Agnes Castronuevo, Archaeologist 541-888-7513 Fax: 541-888-2853 <a href="mailto:acastronuevo@ctclusi.org">acastronuevo@ctclusi.org</a> 1245 Fulton Avenue Coos Bay, OR 97420</td>
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<tr>
<td>Coquille Indian Tribe</td>
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<td>Nicole Norris, Archaeologist 541-756-0904 Fax: 541-756-0847 <a href="mailto:nicolenorris@coquilletribe.org">nicolenorris@coquilletribe.org</a> 3050 Tremont Street North Bend, OR 97459</td>
<td>On 12-19-12, FERC submitted letters to all of the tribes. The letter invited them to participate in the FERC process regarding sensitive resources</td>
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<tr>
<td>Cow Creek Band of Umpqua Indians</td>
<td>Government to government consultation will be conducted by FERC</td>
<td>Amy Amoroso 541-677-5575 ext. 5577 Fax: 541-677-5574 <a href="mailto:aamoroso@cowcreek.com">aamoroso@cowcreek.com</a> 2371 Stephens Street, Suite 100 Roseburg, OR 97470</td>
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<tr>
<td>The Klamath Tribes</td>
<td></td>
<td>Perry Chocktoot Culture &amp; Heritage Director 541-783-2219 Fax: 541-783-2029 <a href="mailto:perry.chocktoot@klamathtribes.com">perry.chocktoot@klamathtribes.com</a> P.O. Box 436 Chiloquin, OR 97624</td>
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<tr>
<td>Confederated Tribes of the Siletz Indians</td>
<td></td>
<td>Robert Kentta Cultural Resources Director 800-922-1399 ext 1244 Fax: 541-444-2307 <a href="mailto:rkentta@ctsi.nan.us">rkentta@ctsi.nan.us</a> P.O. Box 549 Siletz, OR 97380</td>
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<tr>
<td>Confederated Tribes of the Grand Ronde Community</td>
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<td>Erik Thorsgard Cultural Resources 503-879-1630 Fax: 503-879-1352 <a href="mailto:erik.thorsgard@grandronde.org">erik.thorsgard@grandronde.org</a> 9615 Grand Ronde Road Grand Ronde, OR 97347</td>
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<tr>
<td>State</td>
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<td>Hillary Dobson Federal Projects Coordinator 503-378-4041 <a href="mailto:hillary.dobson@state.or.us">hillary.dobson@state.or.us</a> 625 Marion Street NE Salem, OR 97301</td>
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<td>Oregon Department of Energy – Energy Facilities Siting Council</td>
<td>Lead Coordinating State Agency for FERC Pre-Filing Process</td>
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<td>Oregon Division of State Parks Office of Historic Preservation</td>
<td>National Historic Preservation Act – Section 106 Consultation</td>
<td>Dennis Griffin 503-988-0674 <a href="mailto:dennis.griffin@state.or.us">dennis.griffin@state.or.us</a> State Archaeologist 725 Summer St. NE, #C Salem, OR 97301</td>
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Exhibit J-2
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<tr>
<td>Oregon Department of Environmental Quality</td>
<td>Air Contaminant Discharge Permit for Compression Facilities</td>
<td>Philip Allen &lt;br&gt; 503.229.0904 &lt;br&gt; Senior Air Quality Modeler &lt;br&gt; AQ Division Oregon DEQ HQ &lt;br&gt; 811 SW 6th Avenue &lt;br&gt; Portland, OR 97204-1390 &lt;br&gt; &lt;br&gt; Walt West &lt;br&gt; 541-388-6146 &lt;br&gt; Oregon DEQ Bend Office &lt;br&gt; 475 NE Bellevue, Suite 110 &lt;br&gt; Bend, OR 97701</td>
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<tr>
<td>Oregon Department of Environmental Quality</td>
<td>CWA 401 Water Quality Certification &lt;br&gt; CWA 402 NPDES Stormwater Permit and Water Pollution Control Facility (WPCF) – Hydrostatic Test Water</td>
<td>Mary Camarata &lt;br&gt; 541-687-7435 &lt;br&gt; <a href="mailto:camarata.mary@deq.state.or.us">camarata.mary@deq.state.or.us</a> &lt;br&gt; 165 East 7th Ave., Ste. 100 &lt;br&gt; Eugene, OR 97401</td>
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<td>Oregon Department of Water Resources</td>
<td>Permit to Appropriate Water</td>
<td>Jerry K. Sauter &lt;br&gt; Water Rights Program Analyst &lt;br&gt; 503-986-0817 &lt;br&gt; <a href="mailto:jerry.k.sauter@state.or.us">jerry.k.sauter@state.or.us</a> &lt;br&gt; Water Right Services Division &lt;br&gt; 725 Summer Street NE, Ste. A &lt;br&gt; Salem, OR 97301</td>
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<td>Oregon Department of Fish and Wildlife</td>
<td>In-Water Blasting Permit</td>
<td>Art Martin &lt;br&gt; Energy/NRDA Coordinator &lt;br&gt; Wildlife Division &lt;br&gt; <a href="mailto:art.martin@state.or.us">art.martin@state.or.us</a> &lt;br&gt; 503-947-6082 &lt;br&gt; 3405 Cherry Avenue NE &lt;br&gt; Salem, OR 97303</td>
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<tr>
<td>Oregon Department of Transportation</td>
<td>State Highway Crossing Permit</td>
<td>Judith Callens &lt;br&gt; Senior Planner &lt;br&gt; 503-986-3525 &lt;br&gt; <a href="mailto:Judith.h.callens@odot.state.or.us">Judith.h.callens@odot.state.or.us</a> &lt;br&gt; 555 12th Street NE &lt;br&gt; Salem, OR 97301</td>
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<td>Oregon Department of State Lands</td>
<td>Joint Permit with the USACE Removal/Fill Permit</td>
<td>Bob Lobdell &lt;br&gt; 503-986-5282 &lt;br&gt; <a href="mailto:robert.lobdell@dsl.state.or.us">robert.lobdell@dsl.state.or.us</a> &lt;br&gt; 775 Summer Street NE, Ste. 100 &lt;br&gt; Salem, OR 97301</td>
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<tr>
<td>Oregon Department of Land Conservation and Development</td>
<td>Coastal Zone Management Compliance</td>
<td>Juna Hickner 503-373-0650 x 253 <a href="mailto:juna.hickner@state.or.us">juna.hickner@state.or.us</a> 635 Capitol Street, Suite 150 Salem, Oregon 97301-2540</td>
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<tr>
<td>Oregon Department of Forestry</td>
<td>Operate Mechanical Equipment</td>
<td>Scott Swearingen Assistant to Area Director 541-440-3412x132 <a href="mailto:sswearingen@odf.state.or.us">sswearingen@odf.state.or.us</a> 1758 NE Airport Road Roseburg, OR 97470-1499</td>
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<td>Coos County Planning Department</td>
<td>Conditional Use</td>
<td>Jill Rolfe 541-396-3121x210 <a href="mailto:jrolfe@co.coos.or.us">jrolfe@co.coos.or.us</a> Coos County Planning Department 226 N. Adams Coquille, OR 97423</td>
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<td>Douglas County Planning Department</td>
<td>Conditional Use</td>
<td>Cheryl Goodhue Planning Department 541-440-4280 <a href="mailto:cagoodhu@co.douglas.or.us">cagoodhu@co.douglas.or.us</a> Douglas County Courthouse Justice Building – Room 106 Roseburg, OR 97470</td>
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<td>Jackson County Planning Department</td>
<td>Conditional Use</td>
<td>Francisco Hernandez Planner 541-774-6903(7) <a href="mailto:hernanfm@jacksoncounty.org">hernanfm@jacksoncounty.org</a> 10 S. Oakdale, Room 100 Medford, OR 97501</td>
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<td>Klamath County Planning Department</td>
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<td>Bill Adams Director 541-863-5121x3083 <a href="mailto:badams@co.klamath.or.us">badams@co.klamath.or.us</a> 305 Main Street Klamath Falls, OR 97601</td>
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*Exhibit J-4*