

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

**In Reply Refer To:**  
OEP/DG2E/Gas 2  
PennEast Pipeline Company, LLC  
PennEast Pipeline Project  
Docket No. CP15-558-000  
§ 375.308(x)

November 24, 2015

Anthony C. Cox  
PennEast Pipeline Company, LLC  
UGI Energy Services, LLC  
One Meridian Boulevard, Suite 2C01  
Wyomissing, PA 19610

**Re: Environmental Information Request**

Dear Mr. Cox:

Please provide the information described in the enclosure to assist in our analysis of the above-referenced certificate application. File your response in accordance with the provisions of the Commission's Rules of Practice and Procedure. In particular, 18 CFR 385.2010 (Rule 2010) requires that you serve a copy of the response to each person whose name appears on the official service list for this proceeding.

**You should file a complete response within 20 days of the date of this letter.** The response must be filed with the Secretary of the Commission at:

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

If certain information cannot be provided within this time frame, please indicate which items will be delayed and provide a projected filing date. **You should be aware that the information requested is necessary for us to continue preparation of the environmental impact statement (EIS). Once we have received your responses and reviewed them for completeness, we will be able to establish a schedule for completing the EIS.**

When filing documents and maps, be sure to prepare separate volumes, following the guidance outlined on the Commission's website at <http://www.ferc.gov/resources/guides/filing-guide/file-ceii/ceii-guidelines.asp>. Any Critical Energy Infrastructure Information should be filed as non-public and labeled "Contains Critical Energy Infrastructure Information-Do Not Release" (18 CFR 388.112). Cultural resources material containing location, character, or ownership information should be marked "Contains Privileged Information - Do Not Release" and should be filed separately from the remaining information, which should be marked "Public."

File all responses under oath (18 CFR 385.2005) by an authorized PennEast Pipeline Company representative and include the name, position, and telephone number of the respondent to each item.

If you have any questions, please contact me at (202) 502-8964. Thank you for your cooperation.

Sincerely,

Medha Kochhar  
Gas Branch 2

Enclosure

cc: Public File, Docket No. CP15-558-000

PennEast Pipeline Company, LLC (PennEast)  
Docket No. CP15-558-000

**ENVIRONMENTAL INFORMATION REQUEST**

**Resource Report 1 – General Project Description**

1. In section 1.3, page 1-19 to 1-21, tables 1.3-1 and 1.3-2, there are several discrepancies, most notable are the overall construction impacts. Clarify all discrepancies in these tables.
2. In section 1.3.2, page 1-44, PennEast states the compressor station would require “full site development.” Explain what is meant by this statement. Clarify if PennEast would develop the entire site it has purchased, including the wetland on site. The plot plan provided does not show full site development, but indicates the entire property would be surrounded by chain link fence. Clarify where grading would be done within the site.
3. Table 1.3-5, page 1-43 is incomplete. Please complete the modification table.
4. Provide a revised table 1.4-2 that includes the primary region of influence by resource (air, water, cultural, etc.) that would be affected by each project.
5. Expansion associated with St. Luke’s Hospital is not included in cumulative impacts section. Due to the close proximity of the hospital to the pipeline a full analysis of potential cumulative impacts on these facilities should be provided.
6. Provide all correspondences with the mining company associated with the re-route near milepost (MP) 8. Indicate how timing of future mining would precede, overlap, or follow the proposed construction of the Project. Provide an analysis of impacts that could occur should these projects be constructed simultaneously.
7. In section 1.5.1, page 1-64, and section 1.5.1.3, page 1-66, PennEast states that tree clearing would occur over the winter 2016-2017, and that it is possible construction could extend into the winter from October 15-May 15. As previously requested, provide a Winter Construction Plan that outlines steps PennEast would take to stabilize the right-of-way over the winter and during the spring thaw.
8. Provide a Horizontal Directional Drill (HDD) Contingency Plan that outlines measures that PennEast would take in the event of an inadvertent release, including measures to contain and mitigate a release into a waterbody. Also, include in the HDD Contingency Plan how PennEast would determine an HDD attempt had failed and what measures would be taken following that determination.

9. Provide a Blasting Plan that PennEast would implement where blasting would be required to excavate the pipeline trench. Include in the Blasting Plan the measures that would be used if blasting would be needed in waterbodies.
10. Explain the statement that the depth of cover for the proposed pipeline facilities would be in accordance with PennEast's minimum specifications. Provide a description of these specifications; and how and why they would be in compliance, or different from, the U.S. Department of Transportation requirements.
11. Provide the timing restrictions for regulated activities that would discharge sediment into waterbodies as set forth in New Jersey Administrative Code 7:13-10.5(d) of the New Jersey Flood Hazard Area Control Act Rules identified in section 1.5.2.1, and identify how these differ from the FERC Wetland and Waterbody Construction and Mitigation Procedures.
12. Provide the length of each HDD crossing, by MP identified in table 1.5-3.
13. Provide a revised table 1.5-5 that includes the diameter of all natural gas pipelines that would be crossed by the project, and identify whether the crossed pipeline is currently in operation or abandoned.
14. Provide a revised table 1.5-6 that includes the percent slope for each area identified.
15. Provide the MP locations for the anode beds and test stations, including description of land cover and additional impacts at each location.
16. Provide updated tables 1.7-1 and 1.7-2 that include the latest status of consultations with federal and state permitting agencies. Include documentation of any updated consultations as appropriate. Specifically, the U.S. Army Corps of Engineers (COE), U.S. Fish and Wildlife Service (FWS), National Park Service, PSADEP and New Jersey Department of Environmental Protection (NJDEP).
17. Provide a response to items identified by the New Jersey Department of Environmental Protection (NJDEP) in letters filed with the Commission on November 4, 2015 (accession number 20151104-0045) and November 17, 2015 (accession number 20151117-0040).
18. Provide a discussion of mitigation measures that PennEast proposes to implement in response to land use mitigation requests identified on page 4 of the NJDEP letter filed with the Commission on November 4, 2015 (accession number 20151104-0045).

**Resource Report 2 – Water Resources**

19. Provide revised tables 2A-1 and 2A-2 that correct the discrepancies between the listed waterbody crossing widths and FERC classifications of major, minor and intermediate.
20. In section 2.2.1.3, page 2-8, PennEast states that no named surficial aquifers would be crossed by the project in New Jersey. The last sentence states that surficial aquifers in New Jersey are associated with groundwater discharge. Clarify if unnamed surficial aquifers would be crossed by the project in New Jersey, and if so provide background information on those aquifers as appropriate. In addition, PennEast states that “Additional information regarding surficial aquifers for Pennsylvania and New Jersey will be assessed as engineering design progresses for the project.” Describe what additional information will be available versus what has already been provided in Resource Report 2.
21. Table 2.2.4 identifies at least three groundwater seeps that would be within the construction work space. Describe the measures PennEast would implement to restore these seeps once the pipeline has been installed.
22. The text in section 2.2.3 identifies a single potable well within 150 feet of the work space, however table 2.2-5 identifies two wells at MP 84.7. Clarify and/or correct this discrepancy. Also, explain why the last well listed in table 2.2-5 is shaded.
23. In table 2.3-8 both HDD and open cut are identified as crossing methods for Moores Creek. Please clarify and/or correct this discrepancy.
24. In table 2.3-12 PennEast states that no waterbodies that would be affected by the project have impaired designations associated with polychlorinated biphenyls (PCBs); however, the listings for the Susquehanna and Lehigh Rivers include PCBs on their pollutant list. Please clarify.
25. In section 2.3.4.7 PennEast states that one waterbody in New Jersey has sediment related issues with metals and that a determination to cross the waterbody by HDD would be made if necessary to avoid sediment related impacts. Identify the one waterbody that is the subject of that statement, and describe the process that PennEast would apply to determine if the waterbody would be crossed using HDD.
26. Appendix 2, table 2A-2 lists some waterbodies with similar water quality designations within the same drainage as having different construction timing restrictions. Clarify why waterbodies with similar water quality designations within the same drainages have different construction timing restrictions.

27. Provide a description of any special waterbody construction or restoration measures proposed for the crossing of streams designated as C-1 in New Jersey.

### **Resource Report 3 - Fisheries, Vegetation, and Wildlife**

28. In section 3.2.3 PennEast states that in Pennsylvania, riparian buffers would be protected in accordance with Chapter 102 guidelines and permit conditions; and in New Jersey, riparian buffers would be protected in accordance with Flood Hazard Area rules and permit conditions. Provide details of the riparian buffer requirements of the referenced guidelines and permits, and provide a description of how PennEast would protect these riparian buffers as stated.
29. PennEast states that the National Marine Fisheries Service requested seasonal timing restriction on in-water work within the Delaware River to avoid impacts on anadromous fish species. Provide an explanation of whether or not the same seasonal restriction also would apply to tributaries of the Delaware River, and if so, how PennEast would comply.
30. Provide a revised table 3.3-6 that includes total acreage and forested acreage that would be affected, by both construction and operation of the project, within each parcel that would be crossed that is subject to the No Net-Loss Reforestation Act in New Jersey.
31. Provide a revised table 3.4-1 that identifies the wildlife species observed during project surveys that are listed as being endangered, threatened, or of special concern. Confirm their observation and/or occurrence within the proposed construction work space.
32. PennEast states that some additional surveys for timber rattlesnake are ongoing. Provide the results of these surveys.
33. The NJDEP lists multiple species of freshwater mussels as being species of special concern in addition to the dwarf wedge mussel. Explain the potential for the PennEast Pipeline to cross waterbodies that could contain these other species.
34. Provide a table, graph, or other means to clearly show all timing restrictions that would be in effect for specific species or habitats, including waterbody crossings, along the entire length of the pipeline. Where appropriate display by MP range. If needed due to conflicting timing restrictions or cumulative timing restrictions that would not allow enough time for Project construction, explain PennEast's plan for exceptions to the established timing restrictions. Be sure to factor in recent comments on timing restrictions provided by NJDEP in letters filed with the Commission on November 4, 2015 (accession number 20151104-0045) and November 17, 2015 (accession number 20151117-0040).

**Resource Report 4 – Cultural Resources**

35. Confirm that PennEast’s archaeological field approach reflects a revised site sensitivity model that has been accepted by the New Jersey State Historic Preservation Office (SHPO).
36. File documentation, including correspondence from the New Jersey SHPO, that the archaeological field methodology in New Jersey complies with the state guidelines for Phase IB survey.
37. Provide avoidance plans for all historic properties that PennEast proposes to avoid within and directly adjacent to the area of potential effects (APE).
38. File PennEast’s consultation documentation with local historical advisory committees such as the Delaware Township Historic Advisory Committee, and local historical societies about their concerns related to National Register of Historic Places (NRHP)-listed and –eligible properties that may be affected by the project.
39. Provide a description of how PennEast proposes to avoid adversely affecting historic properties such as 18th century aboveground cultural resources, the Delaware Canal, historic covered bridges, and other resources that may be vulnerable to effects from vibration during construction or operation of the facilities. Provide a list of the specific aboveground cultural resources that could be affected and describe the steps that PennEast would implement to avoid impacts.
40. Describe project-related effects on historic districts and historic and rural landscapes listed on or potentially eligible for listing on the NRHP within APE for direct and indirect effects. Examples are but not limited to Revolutionary War-era battle sites, military encampments, and mapped locations of historic troop movements, the Crossroads of the American Revolution National Heritage Area and the Delaware and Lehigh National Heritage Corridor. Provide all of the historic properties in the direct and indirect APE and their distance to the nearest project construction area. Describe the measures that PennEast would take to avoid adversely affecting historic districts and historic and rural landscapes.
41. Stakeholders provided comments that the project crosses areas previously identified as having a potential concern to Native American tribes. File an update of any concerns or comments provided directly by Tribes to PennEast. Additionally, describe the steps that PennEast would take to address areas of concern to Tribes, including those that are state recognized.

42. For all archaeological sites that are recommended as eligible or potentially eligible for the NRHP that would not be avoided, provide the New Jersey and Pennsylvania SHPO comments on archaeological reports and recommendations, Phase II site evaluation work plans, and Phase II site evaluation reports.
43. Provide the results of all historic architecture and landscape studies performed in the project APE for indirect effects and the comments of the New Jersey and Pennsylvania SHPOs on the reports and recommendations.
44. Provide a revised Unanticipated Discoveries Plans for Pennsylvania that includes the following revision:
  - a. Page 2, last paragraph, 3<sup>rd</sup> sentence, revise - “In the event of an unanticipated discovery of human remains, PennEast will refer to the FERC and the PHMC as to the appropriate Native American groups with which to consult.” to “In the event of an unanticipated discovery, PennEast, will notify the appropriate federally recognized Indian tribes previously identified and contacted through the Section 106 consultation process.”

#### **Resource Report 5 – Socioeconomics**

45. Provide an estimate of the percent of the construction workforce expected to temporarily or permanently relocate to the project area, and the duration of their stay.
46. Many commenters expressed concern about the conclusions of the Econsult Solutions Inc. and Drexel University economic impact analysis referenced in PennEast’s application, which estimates that construction of the project would support a total of 12,160 jobs. The fact sheet on PennEast’s web site states that “slightly less than half (of these jobs) would be in industries other than construction” which implies that more than 6,000 jobs would be direct construction jobs. However, peak employment for the entire project is identified in table 5.3-3 as 2,660 jobs and would last for about 8 weeks with a smaller workforce identified for the rest of the construction schedule. Please explain this discrepancy.
47. Provide an estimate of the housing demand by workers temporarily relocating to the area, by housing type (e.g., hotel/motel rooms, rental housing, RV camping spaces) and construction spread. The distribution of workers by housing types may be estimated based on past experience with similar projects.
48. Address the comment that the project would affect the ability of landowners to subdivide or develop their property in the future.

49. Provide additional information on potential project related impact from the movement of construction equipment, materials, and workers on local road networks. Include:
  - a. a list of roads that would be used during construction, and an estimate of construction-related traffic trips to and from the work sites, frequency of the trips over the construction period, and times of peak traffic volumes;
  - b. an assessment of potential physical impacts to existing roads and bridges; and
  - c. identification of the measures that would be used to mitigate potential transportation-related impacts. Potential measures may include construction of new roads, repair of roads to pre-construction conditions, avoidance of existing peak traffic periods, detours, consultation and coordination with local authorities, signage, and notification in newspapers.
50. Identify areas along the proposed pipeline route (by census block group) that contain potential low income or minority populations. Provide a listing of the census block groups that would be crossed or otherwise affected by the project. These data are available from the U.S. Census Bureau for census block groups in the affected counties as part of the 2010 Census and the 2013 5-year American Community Survey estimates.
51. In section 5.2.8, PennEast states that construction and operation of the project are not anticipated to result in the significant displacement of businesses or residences. Clarify if any businesses or residences would be displaced, and if so identify the businesses or residences that would be displaced.
52. Provide documentation of consultations with state and local road and transportation agencies to develop a Residential Access and Traffic Management Plan. The Plan should address:
  - a. identification of existing roads that would be used for project access;
  - b. current average daily traffic counts and anticipated daily traffic counts during construction on local roads that would be used for project access;
  - c. increased traffic from project-related activities (including commuting workers, construction equipment, and truck deliveries), including the number of workers cars, equipment, and trucks that would use local roads, and commuting periods;
  - d. workers being bussed from collection points to the right-of-way;
  - e. locations of commuting workers collection points and bus routes;
  - f. detours and road blockage;
  - g. compaction on dirt roads;
  - h. dust suppression;
  - i. impacts on existing roads and measure to repair them;
  - j. stakeholder prior notification;

- k. maintaining access for home or business owners (including tourist venues and roads frequently used by tourists);
- l. in-road work relative to peak-traffic periods;
- m. safety measures (including signage, fencing and assurance of immediate backfill of trenches);
- n. adherence to road and bridge weight limits;
- o. locations of police detail;
- p. noise impacts; and
- q. tracking of soil and dirt onto paved roads from the construction right-of-way.

### **Resource Report 6 – Geological Resources**

- 53. Provide an overlay of the bedrock geology on figure 6.1-2 (pages 1 through 32); or provide a separate set of figures showing the bedrock geology. These figures should include a legend clearly describing the bedrock lithology.
- 54. Utilizing state agency sources (Pennsylvania Department of Conservation and Natural Resources, and NJDEP Geological and Water Survey) provide a discussion of all consultations, and research conducted regarding karst areas of Pennsylvania, and the density of karst features crossed by the proposed pipeline route (i.e. Digital Karst Density Layer and Compilation of Mapped Karst Features in Pennsylvania - <http://pubs.usgs.gov/of/2003/of03-471/reese/>); and areas underlain by Newark Basing sedimentary bedrock with known elevations of arsenic in groundwater, and suggested monitoring and mitigation measures recommended by these agencies during construction.
- 55. Provide copies of the Geotechnical Data Reports at HDD locations including:
  - a. geotechnical logs for test borings conducted at each crossing;
  - b. description of the subsurface lithology along the drill path, results of standard penetration tests, and bedrock coring including core recover and rock quality designation (RQD) results for each core run. Depict these data on each HDD profile;
  - c. HDD feasibility study conducted by a qualified contractor which utilizes the U.S. Army Corp of Engineers methods contained in their publication "Installation of Pipelines Beneath Levees Using Horizontal Directional Drilling (April 1998) to evaluate, at a minimum: predicted annular pressures and formation pressures along the drill path; and the potential for a release of drilling fluids; and
  - d. crossing profiles which depict the pipeline alignment at each crossing, along with each geotechnical boring the associated results of standard penetration tests and/or bedrock coring results (percent recovery and rock quality designation), as well as the top of the zone of saturation.

56. Provide a narrative describing the results for each proposed HDD crossing, the feasibility of successfully utilizing HDD to complete the crossing and the potential for an inadvertent release. If a drill path would pass through carbonate bedrock, then describe in detail the degree of subsurface karst encountered during drilling, and the potential for the substantial loss of drilling fluids, and the measures to be taken to prevent drilling fluids from appearing within surface water bodies, springs, and within water-supply wells.
57. Provide a Best Drilling Practices Plan for use where HDD is proposed in karst terrain that includes:
  - a. procedures to control significant loss of drilling fluids into the karst environment during drilling;
  - b. spring and well monitoring plan for all receptors down-gradient of the crossing, including identification and monitoring for all receptors that are at a minimum 2,000 feet down-gradient;
  - c. the specific drilling muds and polymers that may be used; and
  - d. evaluation of the potential for impact and describe how PennEast would mitigate a lateral movement of drilling fluid during trenchless crossings that could affect source ground waters such as wells, seeps, and springs.
58. Provide results of any geologic/geotechnical investigations at the proposed meter station and compression station sites, and provide a summary of the results for each site. Provide a description of the geology at contractor yards and other off-right-of-way temporary extra workspace.
59. PennEast states that information regarding the impact on the project resulting from nearby quarry blasting activities will be provided when complete. Provide this information, or a schedule when this information will be available. This information should include the proposed or potential mitigation measures including pre-and post-blast monitoring procedures.
60. Provide a discussion of the potential-related effect of mine/ quarry dewatering, if any by nearby quarries, and the current and/or potential for ground subsidence as a result of this dewatering.
61. Provide a table that identifies by milepost the locations along the pipeline where bedrock may be encountered within trench depth and blasting may be required.
62. Provide a discussion of how PennEast would document the pre-and post-blasting conditions of structures and utilities (water wells) in areas adjacent to where blasting may be required for trench excavation.
63. Identify the locations of approved rock disposal sites.

64. Provide an explanation of the potential project-related effect on future oil and gas development, and development of other mineral rights, in the areas that would be crossed by the pipeline. Describe any setbacks or other measures and requirements that may hamper a landowner's ability to drill a new gas well.
65. Provide the following measures that would be instituted with regards to mining:
  - a. communication plans or procedures that would be used with mine operators including what activities at nearby mines would trigger the need for the mine operators to notify PennEast;
  - b. specific limitations that may affect mining along the Project such as restrictions on excavation, heavy equipment movement, blasting, and planned subsidence for room and pillar mining operations; and
  - c. specific measures that would be used in regards to landsliding and slumping, blasting, excavation, heavy equipment movement, and planned mine subsidence within proximity to the pipeline and aboveground facilities.
66. PennEast states that additional soil characterization borings for the purpose of evaluating seismic hazards are ongoing. Provide the results of these additional studies, or a schedule for when these will be completed and filed with FERC.
67. PennEast states that site-specific evaluations of landslide risks are ongoing, and that it will continue to investigate potential risks and alternative mitigation. Provide, by milepost, a summary of landslide risk and any proposed mitigation for that risk and the results of these site-specific evaluations, or a schedule for when these will be completed and filed with FERC.
68. Provide a figure that depicts the U.S. Geological Survey (USGS) Seismic Hazard Maps for peak ground accelerations (PGA) with a 2 percent and 10 percent probability of being exceeded within 50 years, and state what the mapped PGA(s) are for the Project areas.
69. For construction through karst and/or areas with current, or planned mine subsidence, provide the maximum intrinsic ability for the proposed pipeline to span subsidence features unsupported. Provide the documentation showing where this information was derived.
70. As described in Section 6.3.4, the results of a geophysical study completed Hager-Richter included a recommendation that PennEast complete additional electrical resistivity imaging (ERI) at a number of locations, including possible karst impacted areas. Provide the results of these additional studies, or a schedule for when these will be completed and filed with FERC.

71. Provide a review and analysis of known caves within 0.25 mile of the pipeline. Include documentation of consultations with appropriate state and local agencies regarding caves.
72. PennEast states that it is developing a Karst Mitigation Plan to address any potential impacts and hazards from karst features. Provide a copy of the Karst Mitigation Plan, or provide a schedule for when the plan will be filed with FERC. The plan should address the following:
  - a. measures to identify areas of known or potential karst;
  - b. avoidance, minimization and mitigation measures for sinkholes and caves within 200 feet of the pipeline centerline;
  - c. best management practices to prevent contamination of groundwater and karst systems from run-off from within and off the right-of-way toward a karst feature;
  - d. pre- and post-construction monitoring of water quality and yield of wells and springs used for domestic supplies within 150 feet of the right-of-way;
  - e. identify the construction set-back from wells, springs, and karst surface expressions;
  - f. blasting in karst terrain, and potential impact on wells and springs;
  - g. equipment storage, fueling, and maintenance procedures;
  - h. procedures in the event of an unanticipated discovery of karst features during construction; and
  - i. description of measures that would be implemented to repair or mitigate the development of a sinkhole in proximity to the pipeline, and the monitoring of these features during Project operation.
73. Provide a discussion of the potential to encounter naturally occurring uranium and radon during construction, include discussion of potential impacts to the public as a result, and describe appropriate monitoring and mitigation techniques.

#### **Resource Report 7 - Soils**

74. Provide the source of the electronic data used for soil mapping.
75. Provide a revised figure 7.1-1 that includes the proposed aboveground facilities, and all temporary construction workspace, including contractor yards and pipe laydown areas.
76. Provide the soil type and characteristics under the land that would be permanently and temporarily impacted by aboveground facilities, by acreage, along with a table on soil type/characteristics temporarily impacted.

77. Explain how hydric soils would be affected by construction and operation of the project. Include a calculation of the percentage of the pipeline that would cross hydric soils.
78. Provide a description of the type of soil amendments and conditions under which soil amendments would or would not be used. Also include all methods PennEast would use to aid in revegetation (i.e. seed bed preparation, seeding methods, seeding rates, and anchoring methods).
79. Describe the method(s) that PennEast would use to remove excess rock and stone greater than four inches from agricultural lands.

### **Resource Report 8 – Land Use, Recreation and Aesthetics**

80. Clarify the discrepancy between table 8.2-2 and table 1.3-1 with regard to the acreage that would be required for construction and operation of the mainline.
81. Provide an update on ongoing negotiations with existing utility companies as to the amount of overlap that could be safely allowed, and if any additional workspace/right-of-way would be required for construction and operation of the project adjacent to existing utilities. If additional workspace would be needed, explain how much and the reason it would be needed.
82. Provide temporary and permanent impact acreage calculations by land use for access roads and all aboveground facilities, including interconnects, mainline valves, launcher/receiver sites, and the compressor station. This table should be based on proposed right-of-width and formatted similarly to table 8.2-2.
83. As required in our Guidance Manual for Environmental Report Preparation, provide written landowner agreements for all residences that would be within 10 feet of any construction work space. For each location where a residence would be within 10 feet of the construction work space, and the landowner has not yet provided a written agreement to PennEast, explain why measures, such as reducing the workspace, shifting the working side of the construction right-of-way, or moving or removing extra workspaces to maximize the offset between the residence and construction work areas would not be feasible.
84. For those structures within the construction workspace, indicate whether PennEast plans to relocate or purchase the structures. Provide a list and description of any residences that PennEast proposes to purchase outright.
85. Provide a schedule for when permanent repairs would be completed to agricultural drain tiles impacted by construction (i.e., within so many days of pipeline installation).

86. Provide a description of general impact minimization and mitigation measures that would be used by PennEast to minimize impacts on specialty agricultural areas identified in table 8.3-4, and which could be fine-tuned to match site-specific conditions.
87. Provide an update on the status of the Section 408 process for crossing the Francis E. Walter Dam and Beltzville State Park.
88. Clarify who the landowner is for the parcel(s) through which PennEast is proposing to cross the Appalachian National Scenic Trail. Provide updated alignment sheets that includes this information, and provide documentation of consultation with the landowner and/or land-managing agency regarding the proposed crossing.
89. Provide a description of general impact minimization and mitigation measures that would be used by PennEast to prevent impacts on state-owned lands, such as state parks and state game lands, which could be fine-tuned to match site-specific conditions. These measures should specifically address recreational areas and visitor access.
90. Provide a revised table 8.4-1 that corrects discrepancies in subtotals of federal, state, county, municipal lands, and public conservation areas that would be crossed. Include the crossing method and any special construction measures that PennEast would implement when crossing each special recreation land. Provide revised text as needed to match the revised table 8.4-1.

## **Resource Report 9 – Air and Noise**

### **Air Quality**

91. Provide details on PennEast’s proposed fugitive dust control measures. Include a description of the decision process for when and where dust control would be implemented, and identify potential sources of water that would be used, and any permits that may be required for water withdrawal or other dust suppression activities.
92. In responding to public comments about loss of CO<sub>2</sub> sequestration capacity, PennEast states “It is the intent of the project to cause no net loss in vegetative sequestration capacity through conformance with the FERC Upland Erosion Control, Revegetation, and Maintenance Plan (May 2013) (Plan).” However, the referenced FERC Plan does not require the replacement of trees that are removed from the right-of-way. Clarify how conformance with the FERC Plan would prevent a net loss in vegetative sequestration capacity.

93. Provide a discussion regarding the feasibility of using waste heat electric generation (cogeneration) for the proposed turbines at the Kidder Compressor Station. Provide the rate of electricity potentially generated on a kilowatt/month basis and compare this with the amount of electricity used by the compressor station per month. Describe the average load factor of the facility and any impediments that would prevent the operation of the compressor station continuously at 60% minimum load. Compare the size of the electric transmission line necessary under the current proposal with what would be required under a cogeneration system with return to the electric grid.
94. Indicate whether PennEast has looked into the feasibility of installing electric motor driven compressor units instead of the natural gas currently proposed.
95. PennEast is proposing to install one fuel gas heater at the compressor station and five heaters at interconnects. Clarify which natural gas heaters are presented in table 9.1-3 and revise as appropriate.
96. Currently table 9.1-3b includes the operational emissions of three heaters and two interconnects. However, the project would include five heaters and three interconnects. Clarify this discrepancy and revise table 9.1-3b as appropriate.
97. Provide a revised table 9.1-3c that includes the emissions of the one fuel gas heater at the compressor station, five heaters at interconnects, and the auxiliary power line.
98. Provide a copy of the permit application of the Kidder Compressor Station, or indicate when it will be available.
99. Indicate whether open burning would be used. If so, provide the mitigation measures PennEast would use to minimize air emissions from burning any brush, slash, or and materials generated from construction activities and describe any applicable state or local regulations. Estimate the emissions of criteria pollutants (NO<sub>x</sub>, VOC, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>), total hazardous air pollutants (HAPs) and greenhouse gases (GHGs) in tons per year from open burning. In addition, identify any state or local regulations or permits required for open burning.
100. Indicate whether PennEast would install any blowdown facilities at the Kidder Compressor Station. In addition, estimate the number of yearly releases, the amount of VOC and GHG released per blowdown in tons per year.
101. Provide an air quality screening (AERSCREEN) analysis of the Kidder Compressor Station demonstrating that emissions of criteria pollutants do not result in exceedance of the National Ambient Air Quality Standards (NAAQS), SILs or state standards. Include all input parameters (emission rate, stack height,

stack temp, exit velocity, etc.) and justify bases for any assumptions. For any facility requiring refined modeling for an air permit using refined modeling (AERMOD or EPA-approved alternative), provide the modeling protocol, a narrative describing and justifying the modeling basis all inputs (MET data, terrain data), and all input and output files.

102. Provide the distance and direction to the nearest federal Class 1 area.
103. Provide an inventory of current, proposed, and reasonable foreseeable air emission sources within 50 miles of the Project vicinity. Emission sources could be any industrial facilities (i.e., compressor stations, refinery, etc.), and the construction and operational emissions from oil and gas production wells. Provide the location, distance of those emissions sources from the proposed Project, estimated permitted emissions for each criteria pollutant in tons per year, any permits these facilities received or will receive, and then describe the potential incremental cumulative impacts.

### Noise

104. With regard to HDD activities, provide the following:
  - a. It is stated that once survey access has been obtained, noise studies at the NSAs nearest to the HDDs entry and exit locations would be conducted. Indicate PennEast's plan to conduct noise surveys at the nearest noise sensitive areas (NSAs) to HDDs in the event PennEast can't obtain survey access;
  - b. identify all NSAs within ½ mile of each HDD entry and exit location;
  - c. the estimated number of days of drilling required for each location, and whether drilling would be done 24 hours per day;
  - d. a topographic map showing the distance and direction of the nearest NSAs within ½ mile of each HDD entry and exit location;
  - e. the ambient day-night average noise ( $L_{dn}$ ) at the nearest NSAs, the estimated noise impacts at the NSAs during drilling activities, and the total noise including ambient and estimated noise; and
  - f. a description of any noise mitigation (or propose alternate measures such as temporary relocation, compensation, etc. that would be implemented during short term drilling operations) which would be implemented during drilling activity to reduce noise impacts at the NSAs to below 55 dBA  $L_{dn}$ , or 10 dBA over background if ambient levels are above 55 dBA  $L_{dn}$ .
105. Provide a revised table 9.2-3 that includes the calculated  $L_{dn}$  sound level metrics for all short-term monitoring locations.
106. Provide a figure showing estimated sound contours during operation of the Kidder Compressor Station. The figure should include the NSAs identified in table 9.2-12 and the same study area shown in figure 9.2-3.

107. Provide a revised table 9.2.12 that includes:
  - a. the average ambient sound levels, not just the quieter ambient sound levels;
  - b. clarification whether the estimated noise listed includes mitigation or not; and
  - c. the estimated noise with mitigation and without mitigation.
108. The NSAs presented in table 9.2-13 and table 9.2-12 do not match. Provide revised tables 9.2-13 and 9.2-12 with matching NSAs, and use consistent baseline  $L_{dn}$  values to represent ambient sound levels at those NSAs. Also, include the calculated resulting increase in ambient sound levels at each NSA.
109. PennEast states on page 9-41 that the Snow Ridge Village, Jack Frost Big Boulder Ski Area, Jack Frost Natural Golf Club, Hickory Run State Park, and the Beltzville State Park would be over 1 mile away from the Kidder Compressor Station. Provide the distance of those recreational areas from proposed HDD entry and exit locations. Provide revised table 9.2-14 that includes predicted pipeline construction noise levels at the three NSAs presented in table 9.2-12; the Econolodge, Pizza Residence, and Golf Course.
110. Confirm that the column in table 9.2-15 labeled as “estimated existing ambient noise level” includes actual measured ambient sound levels at each HDD crossing. In addition, confirm that the column labeled as “total estimated ambient sound level” represents the total cumulative sound level of ambient conditions plus the proposed HDD activities.
111. Provide a discussion of noise related to blasting during pipeline trench excavation.
112. Provide a noise analysis from the operation of meter stations and mainlines valves within  $\frac{1}{2}$  mile of the NSAs, which includes the ambient noise, estimated noise, and total noise in  $L_{dn}$ . In addition, identify any mitigation measures, including specific control, equipment that PennEast would commit to in order to reduce noise.

**Resource Report 10 - Alternatives**

113. Provide a table similar to table 10.2-1 for the Transco Leidy Line Alternative, but that includes the following revisions:
- a. the addition of a column that lists resources that would be affected by the proposed route between about mileposts 19 and 114;
  - b. additional pipeline on the Transco Leidy Alternative as needed to make the alternative end at the same point as the proposed route, or a statement confirming that PennEast's proposed natural gas deliveries could be made at the end point of the alternative as shown on PennEast's figure 10.2-1;
  - c. the resources affected by the alternative route only along the section of alternative between about MPs 19 and the end point of the alternative (as determined in item b above);
  - d. for all acreage calculations included in the table, revise to show only the acreage that would be affected by actual project construction and operation of the proposed or alternative pipelines, not the resources within the 400 foot study corridor;
  - e. the acreage of forest vegetation that would be affected by both pipeline construction and operation;
  - f. acreage of forested wetland that would be affected by both pipeline construction and operation;
  - g. for resources crossed by the proposed and alternative routes, and quantified by the number of crossings, the number of these resources that would be crossed by the pipeline centerline, not number within the 400 foot study corridor; and
  - h. the number of residences that would be within 50 feet of the pipeline construction work areas.
114. Provide narrative text that describes a major pipeline alternative route that would follow the Transco Leidy line between approximate MPs 19 and 114 of the proposed route. Include the environmental characteristics of the alternative and the corresponding segment of the proposed route, including any significant resources that would be crossed. Summarize the potential environmental advantages and disadvantages of this major route alternative compared to the corresponding segment of proposed route, and include a clear statement of the overall advantages and disadvantages of the proposed route. Also, provide a figure showing the pipeline alternative and corresponding segment of proposed route (see items a. and b. in the preceding request, using U.S. Geological Survey topographic mapping as the base).

115. For the analysis of the alternative to the corresponding segment of the proposed route between approximate MPs 75 and 97, provide the following:
- a. a narrative that describes why PennEast evaluated the alternative, the location of the alternative including the corresponding MPs (of the proposed route) where the alternative deviates from and rejoins the proposed route, and the environmental characteristics of the alternative and the corresponding segment of the proposed route, including any significant resource issues crossed;
  - b. Summarize the potential environmental advantages and disadvantages of this alternative compared to the corresponding segment of proposed route, and include a clear statement of the overall advantages and disadvantages of the proposed route;
  - c. a revised table 10.3-10 that includes:
    - i. for all acreage calculations included in the table, revise to show only acreage that would be affected by actual project construction and operation of the proposed and alternative pipelines, not the resources within the 400 foot study corridor;
    - ii. acreage of forest vegetation that would be affected by both pipeline construction and operation;
    - iii. acreage of forested wetland that would be affected by both pipeline construction and operation;
    - iv. for resources that would be crossed by the proposed and alternative routes, and quantified by the number of crossings, show the number crossed by the pipeline centerline, not number within the 400 foot study corridor;
    - v. the number of residences that would be within 50 feet of the pipeline construction work areas;
    - vi. the number and/or acreage of sensitive or specially designated habitats or land uses crossed; and
  - d. a revised figure 10.3-4 using USGS topographic mapping as the base.
116. For the analysis of the alternative to the corresponding segment of the proposed route between approximate MPs 97 and 110, provide the following:
- a. revised alternative pipeline route that includes additional pipeline at the end of the alternative as needed so the alternative ends at the same location as the proposed route, or a statement confirming that the proposed natural gas deliveries could be made at the end point of the alternative route as shown on PennEast's figure 10.3-5;
  - b. a narrative that describes why PennEast evaluated a specific route alternative, the location of the alternative including the mileposts (of the proposed route) at which the alternative deviates from and rejoins the proposed route, and the environmental characteristics of the alternative and the corresponding segment of the proposed route, including any significant resource issues crossed.

- Summarize the potential environmental advantages and disadvantages of this alternative compared to the corresponding segment of proposed route, and include a clear statement of the overall advantages of the proposed route;
- c. revised table 10.3-11 that includes the following:
    - i. the revised pipeline alternative if needed based on item a. above;
    - ii. for all acreage calculations included in the table, revise to show only acreage that would be affected by actual project construction and operation of the proposed or alternative pipelines, not the resources within the 400 foot study corridor;
    - iii. acreage of forest vegetation that would be affected by both pipeline construction and operation;
    - iv. acreage of forested wetland that would be affected by both pipeline construction and operation;
    - v. for resources crossed the proposed and alternative routes, and quantified by number of crossings, revise to show the number crossed by the pipeline centerline, not number within the 400 foot study corridor;
    - vi. number of residences located within 50 feet of the pipeline construction work area;
    - vii. the number and/or acreage of sensitive or specially designated habitats or land uses crossed; and
  - d. revised figure 10.3-5 using USGS topographic mapping as the base, and also showing the revised pipeline alternative route if needed based on item a. above.
117. For any other major pipeline reroute described in section 10.3.2 that can be compared directly to the currently proposed route (not a previous pipeline route), provide the same information as requested above for MPs 75-97 and MPs 97-110.
  118. Evaluate an alternative route that would avoid the wellhead protection area at MP 87.2. The alternative should evaluate the potential for the pipeline route to shift east near MP 85.7, continuing east until after the crossing of Route 513 (Everittstown Road). At the western edge of the property east of Route 513, the route would then shift south until meeting back up with the planned route.
  119. Provide a narrative that compares the environmental and engineering advantages and disadvantages of the alternative compressor station site to the proposed site. Identify the NSAs in proximity to each site, including their distance and direction from each site, and description of topography and vegetation between the NSAs and the proposed and alternate sites. Include a clear statement of the overall advantages and disadvantage of the proposed and alternative sites.

120. Provide revised table 10.3-20 that includes:
  - a. total acreage required for construction and operation;
  - b. acreage of forest clearing required for construction and operation;
  - c. noise sensitive areas; and
  - d. for all acreage calculations included in the table, revise to show only acreage that would be affected by actual project construction and operation of the proposed or alternative compressor station sites, not the resources within the 400 foot study corridor.
  
121. For each route variation included in appendix P, include a narrative that describes why PennEast evaluated the variation, the location of the variation including the beginning and ending MPs (of the proposed route) at which the variation deviates from and rejoins the proposed route, and any significant resource issues that would be crossed. Summarize the potential environmental advantages and disadvantages of the variation compared to the corresponding segment of proposed route, and include a clear statement of the overall advantages and disadvantages of the proposed route at this location. Be sure to identify comments received from landowners, land managing agencies, or regulatory agencies that factored into the evaluation of each variation.

Document Content(s)

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