October 16, 2013

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington D.C. 20426

RE: Delaware Riverkeeper Network's Comments In Response to the Environmental Assessment – Texas Eastern TEAM 2014 Project (Docket No. PF13-84).

Dear Secretary Bose:

The Delaware Riverkeeper Network ("DRN") submits the following comments on the deficiencies of the Environmental Assessment ("EA") prepared by the Federal Energy Regulatory Commission ("FERC" or "Commission") with respect to the Texas Eastern Team 2014 Project (the "Project") proposed by Texas Eastern. The purpose of the Project is to transport an additional 600,000 dekatherms per day (Dth/d) of natural gas to markets along the Texas Eastern system in the Northeast and Gulf Coast areas, as well as, to markets in the Midwest and Southeast through Texas Eastern's pipelines.

In the Delaware Watershed alone, the 5.6 mile Bernville Loop would pass through parts of Berks County. According to the Environmental Assessment, the pipeline will cut across 3 wetlands, of which at least one wetland could be habitat for the federally listed threatened bog turtle. The proposed pipeline will also cut across seven waterbodies including a 230 wide pipeline crossing of the Schuylkill River (WWF) which serves as drinking water for Philadelphia. Unnamed tributaries to the Schuylkill River (WWF,MF) and Laurel Run

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(CWF,MF) would also be crossed by the pipeline. The eastern small footed bat, a Pennsylvania threatened species (Myotis leibii), is resident to this area of the Bernville Loop. Access roads to the pipeline are proposed on Irish Mountain where there are very steep slopes (TAR 2.5, 2.7, 3.2).

I. Environmental Impacts from Pipeline Construction Activity Not Properly Addressed

A brief survey of published environmental studies suggests that pipeline construction activities result in four primary impacts to groundcover affecting water resources, including: erosion and sedimentation, loss of riparian vegetation, forest and habitat loss and fragmentation, and cumulative impacts. Each one of these four major impacts is not sufficiently addressed in the Environmental Assessment for the Project.

Studies documenting the effects of stream crossing construction on aquatic ecosystems identify sediment as the primary stressor for construction on river and stream ecosystems.[1] During the pipeline stream crossings construction, discrete peaks of high suspended sediment concentration occur during activities such as blasting, trench excavation, and backfilling.[2] The excavation of streambeds can generate persistent plumes of sediment concentration and turbidity.[3] This sedimentation has serious consequences for the benthic invertebrates and fish species whose vitality is crucial for healthy aquatic ecosystems. There have been documented reductions in benthic invertebrate densities, changes to the structure of aquatic communities, changes in fish foraging behavior, reductions in the availability of food, and increases in fish egg mortality rates.[4] In addition to the stream crossing construction activity itself, the associated new

[1] Scott Read, *Effects of Sediment Released During Open-cut Pipeline Water Crossings*, Canadian Water Resources Journal, 1999, 24: (3) 235-251.
[2] *Id.*
[3] *Id.*
[4] James Norman, et al., *Utility Stream Crossing Policy*, ETOWAH Aquatic Habitat Conservation Plan, July 13, 2008, 9-10.

road construction increases the risk of erosion and sedimentation.[5] Texas Eastern was not required to accumulate baseline surveys of benthic invertebrates at all stream crossings to ensure that post-construction conditions are substantially similar to pre-construction conditions.

Many of the sediment and erosion control best management practices identified in the Environmental Assessment are not designed to be protective during significant rain events. For example, heavy rains during two tropical storms in August and September of 2011 caused extensive failures to erosion and sediment controls on pipelines under construction in north central Pennsylvania resulting in environmental harm from sedimentation plumes in nearby water resources.[6] Texas Eastern was not required to provide design parameters and typicals for erosion control measures that can withstand significant rain events in vulnerable areas (for example, in steep slopes areas).

Pipeline construction also results in the loss of riparian vegetation.[7] For each pipeline construction technique, there is a resulting loss of foliage associated with clearing the stream banks. This reduction in foliage increases stream temperature and reduces its suitability for fish incubation, rearing, foraging and escape habitat.[8] Texas Eastern was not required to perform baseline testing on water temperatures for river and stream crossings to ensure that it is substantially the same post-construction temperatures as were present pre-construction.

The loss of vegetation also makes the stream more susceptible to erosion events, as the natural barrier along the stream bank has been removed. Deposited sediment from construction activities can also fill in the interstitial spaces of the streambed, changing its porosity and

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[5] *En Banc* Hearing of the Pennsylvania Public Utility Commission on Jurisdictional Issues Related to Marcellus Shale Gas Development, Docket No. I-2010-2163461.
[6] Craig R. McCoy and Joseph Tanfani, *Similar Pipes, Different Rules*, PHILADELPHIA INQUIRER, available at, http://articles.philly.com/2011-12-12/news/30507185_1_hazardous-materials-safety-administration-pipeline-safety-rules
[7] Norman at 8.
[8] Canadian Association of Petroleum Producers, Canadian Energy Pipeline Association, and Canadian Gas Association, *Pipeline Associated Water Crossings*, Prepared by TERA Environmental Consultants and Salmo Consulting, Inc. (2005), 1-4.

composition, and thereby increasing embeddedness and reducing riffle area and quality.[9] Furthermore, deposited sediment has the potential to fill in pool areas and reduce stream depth downstream of the construction area.[10] Texas Eastern was not required to specifically address these issues in their plans.

Forest fragmentation and habitat loss is a serious and inevitable consequence of increased pipeline construction activity. The right of way for a pipeline construction zone ranges from 25-200 feet, on average, [11] the right of way for Texas Eastern's project extends no less than 100 feet in many areas. The Nature Conservancy has determined that "[t]he expanding pipeline network could eliminate habitat conditions needed by "interior" forest species on between 360,000 and 900,000 acres as new forest edges are created by pipeline right-of-ways." In addition, the right of way will need to be maintained and kept clear throughout the lifetime of the pipeline, which can be up to 80 years. There are numerous ways in which best management practices can be deployed to significantly reduce the area disturbed along the ROW. Texas Eastern should be required to reduce its footprint to the greatest extent possible in all areas where water resources may be impacted by construction. Texas Eastern has shown that the ROW can be significantly reduced in highly congested population centers, however, Texas Eastern was not required to deploy those same techniques in environmentally sensitive areas.

The clearing of forest for pipelines can also result in the introduction of invasive species (such as Japanese knotweed and hay scented fern), native wildlife species decline, and the creation of microclimates that degrade forest health through sunscald and wind-throw. Habitat fragmentation also deprives interior forest species of the shade, humidity, and tree canopy

[9] Read at 235-251.
[10] Norman at 9-10.
[11] Nels Johnson, et al., *Natural Gas Pipelines*, THE NATURE CONSERVANCY, 1 (December 2011) at 6.

protection that well developed deep forest environments provide.[12] Furthermore, oftentimes the land being cleared has been identified as soils that have poor re-vegetation growth, thus resulting in land being "temporarily cleared" for construction activity that is then unable to be restored to its previous condition. Texas Eastern does not sufficiently explain how it plans to ensure that these negative impacts will be avoided.

The cumulative impact of multiple construction sites for water crossings on a stream or river has the potential to significantly degrade the quality and flow rate of the water body. The capacity of a water system to recover from a multitude of impacts may be exceeded with the detrimental effects of crossing construction becoming permanent.[13] Recurrent stresses on fish, such as those originating from elevated suspended sediment concentrations, will have negative effects on fish health, survival and reproduction.[14] FERC must require Texas Eastern to perform an evaluation of the cumulative impacts to each water resource crossed in addition to the potential impacts from their own construction activity. This evaluation should include an analysis of any state issued water resource crossing permit that was issued for construction activity within a 3 year period. Whether considered individually or cumulatively, pipeline projects have both short- and long-term impacts to the region's water resources through their significant disturbance of ground cover affecting water resources.

II. Delaware River Basin Was Not Requested By The Commission To Act As A Cooperating Agency Status

To the extent that the Delaware River Basin Commission ("DRBC") was not requested to participate as a cooperating agency in the NEPA process for this Project, the resulting Environmental Assessment is defective and unlawful. The DRBC has both the requisite "jurisdiction by law," and "special expertise" to qualify as a cooperating agency for this project.

[12] *Id.* at 7.
[13] CAPP (2005) at 1-4.
[14] *Id.*

FERC, as the lead agency for the project, "shall [r]equest the participation of each cooperating agency in the NEPA process at the earliest possible time." 40 C.F.R. § 1501.6(a)(1). Section 1508.5 provides the definition for what qualifies as a "cooperating agency:"

> Cooperating Agency means any Federal agency other than a lead agency which has jurisdiction by law *or* special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. The selection and responsibilities of a cooperating agency are described in § 1501.6. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency. (emphasis added) 40 C.F.R. § 1508.5.

Agencies have jurisdiction by law if they possess "authority to approve, veto, or finance all or part of the proposal." *Id.* § 1508.15. Agencies have "special expertise" if they have expertise "with regard to the environmental issues involved." *Colorado Environmental Coalition v. Office of Legacy Management*, 819F.Supp.2d 1193, 1216 (D. Col. 2011). A lead agency, such as FERC, "*must request* the participation in the NEPA process of any agency fulfilling the definition of 'cooperating agency.'" (emphasis added) *Id*. Where a lead agency fails to properly invite a proper agency to serve as a cooperating agency that error is more than harmless. *Id*.

The DRBC is a regional inter-state body with the force of law to oversee a unified approach to managing a Delaware River system without regard to political boundaries. Texas Eastern is in the process of upgrading its entire pipeline corridor in Pennsylvania; therefore, the DRBC is the most logical choice for an agency to provide useful information to FERC regarding the potential environmental impacts on the water resources of the basin. Furthermore, the DRBC is uniquely qualified with expertise in water resource protection, conservation, and management. A significant portion of Texas Eastern's Project is planned to cross numerous water resources and sensitive ecosystems within the Basin. In light of the DRBC's experience and familiarity with the water resources of the basin, they are a vital, and indeed, necessary resource for FERC. The DRBC qualifies under both the "jurisdiction by law" and the "special expertise" triggers

provided in § 1508.5. Therefore, FERC should request that the DRBC be a cooperating agency for this project.

Project sponsors who propose certain construction activities in the Delaware River Basin must submit docket applications to the DRBC for review to ensure that the project does not conflict with the DRBC's Comprehensive Plan, and that the project is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin. Within that context, the DRBC's Rules of Practice and Procedure ("RPP") provide regulatory authority to approve or deny pipeline project docket applications such as Texas Eastern's Project.

The DRBC requires that project sponsors, including pipeline companies, receive docket approval for any proposal to withdrawal from ground water, impoundments, or running streams "when the daily average gross withdrawal during any 30 consecutive day period does not exceed 100,000 gallons." RPP 2.3.5.A.2-3. Many recent pipeline projects have met this threshold and were required to submit a docket application to the DRBC. Two examples of FERC authorized projects that received such review are the Tennessee Gas Pipeline Company's Northeast Upgrade Project (Docket No. Cp11-161) and Transco's Northeast Supply Link (Docket No. CP12-30). In the Environmental Assessments for both projects a list of required permits and authorizations was provided, which included the requirement of receiving DRBC docket approval for hydrostatic testing.

Furthermore, in 1992, in response to a petition filed by DRN, the DRBC launched the Special Protection Waters (SPW) program, which established regulations to "keep the clean water clean" in the upper and middle sections of the non-tidal Delaware, portions of which had been designated by the federal government as part of the National Wild and Scenic Rivers System in 1978. Following the federal designation of an additional 38.9 miles of the Delaware in the National Wild and Scenic Rivers System in 2000, and again in response to a petition filed by

DRN, in 2008 the DRBC expanded SPW coverage to include the river from the Delaware Water Gap National Recreation Area downstream to the head of tide at Trenton, New Jersey. The entire 197-mile non-tidal river is now included under the SPW regulations, which is believed to be the longest stretch of anti-degradation policy established on any river in the nation.

Special Protection Waters are waters designated by the DRBC, pursuant to the Water Quality Regulations, that have exceptionally high scenic, recreational, ecological, and/or water supply values and are subject to stricter control of non-point pollution control, wastewater discharges, and reporting requirements to prevent degradation.

Article 3 of the Water Code, Section 3.10.3.A.2 establishes the strict anti-degradation standard that the DRBC applies to Special Protection Waters of the Basin: "It is the policy of the Commission that there be no measurable change in existing water quality except towards natural conditions . . ." Water Code Article 3, Section 3.10.3.A.2.e requires that "Projects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan that controls the new or increased non-point source loads generated within the portion of the project's service area which is also located within the drainage area of Special Protection Waters."

The DRBC's RPP classifies projects for review under Section 3.8 of the Compact into two categories, those deemed not to have a substantial effect on the water resources of the Basin and therefore not required to be submitted for Commission review, and those deemed to have substantial effects on water resources of the Basin and therefore required to be submitted for Commission review. *See* RPP Article 3, Section 2.3.5.

With respect to natural gas pipeline projects, the RPP categorizes them as projects that presumptively do not have a substantial effect on the water resources of the Basin and that therefore do not automatically require Commission review:

> Electric transmission or bulk power system lines and appurtenances; major trunk communication lines and appurtenances**; natural and manufactured gas transmission lines and appurtenances**; major water transmission lines and appurtenances; **unless they would pass in, on, under or across an existing or proposed reservoir or recreation project area as designated in the Comprehensive Plan; unless such lines would involve significant disturbance of ground cover affecting water resources** . . . RPP Article 3, Section 2.3.5.A(12) (emphasis added).

This section contains two independent exceptions to the exemption that, if the stated conditions are met, trigger DRBC review: first, if the project in question crosses an existing or proposed reservoir or recreation area that has been incorporated into the Comprehensive Plan, and second, if the project involves a significant disturbance of ground cover affecting water resources.

As recently as January 2013, the DRBC has exercised their authority to review projects pursuant to the authority provided in Section 2.3.5.A(12) on projects that were Certificated by FERC. These projects include the Tennessee Gas and Pipeline Company's 300 Line Upgrade Project (Docket No. CP09-444), and Columbia's 1278k Replacement Project (Docket No. CP10-492).

Additionally, this section of the RPP is not the only source of jurisdictional authority for the DRBC to take jurisdiction over natural gas pipeline projects and require that such projects be reviewed prospectively for consistency with the Comprehensive Plan. Other sources of jurisdictional authority over natural gas pipeline projects include the following RPP sections:

- Article 3, Section 2.3.5.B(5) ("Deepening or widening of existing stream beds . . . or the dredging of the bed of any stream or lake and the disposal of the dredged spoil, where the nature or location of the project would affect the quantity or quality of ground or surface waters, or fish and wildlife habitat");
- Article 3, Section 2.3.5.B(6) ("Discharge of pollutants into surface or ground waters of the Basin");

- Article 3, Section 2.3.5.B(7) ("[P]ipelines and electric power and communication lines");
- Article 3, Section 2.3.5.B(9) ("Projects that substantially encroach upon the stream or upon the 100-year flood plain of the Delaware River or its tributaries");
- Article 3, Section 2.3.5.B(10) ("Change in land cover on major ground water infiltration areas");
- Article 3, Section 2.3.5.B(13) ("Draining, filling, or otherwise altering marshes and wetlands");
- Article 3, Section 2.3.5.B(18) ("Any other project that the Executive Director may specially direct by notice to the project sponsor or land owner as having a potential substantial water quality impact on waters classified as Special Protection Waters").

The DRBC possesses both "jurisdiction by law" and "special expertise" for review of pipeline projects in the Delaware River Basin, and specifically this pipeline project, and therefore FERC must formally request that the DRBC be asked to participate as a cooperating agency for the Project. Furthermore, FERC's request should appear on the public docket, and become part of the administrative record for the project.

III. Improper Texas Eastern Project Segmentation

Texas Eastern has improperly split the overall expansion of its natural gas pipeline system into smaller components, thus avoiding a more rigorous environmental review of the construction activity. FERC may not approve segmented projects; this unlawful practice is known variously as fragmenting, piecemealing, and, more commonly, segmentation. *See Taxpayers Watchdog v. Stanley,* 819 F.2d 294, 298 (D.C. Cir. 1987) ("'Piecemealing' or 'Segmentation' allows an agency to avoid the NEPA requirement that an EIS be prepared for all major federal actions with significant environmental impacts by dividing an overall plan into component parts, each involving action with less significant environmental effects."); *Susquehanna Valley Alliance v. Three Mile Island Nuclear Reactor,* 619 F.2d 231, 240 (3d Cir.

1980) ("Segmentation of a large or cumulative project into smaller components in order to avoid designating the project a major federal action has been held to be unlawful." (citing *City of Rochester v. U.S. Postal Serv.*, 541 F.2d 967, 972 (2d Cir. 1976)); *see also* 40 C.F.R. § 1508.27(b)(7).

Texas Eastern has demonstrated their intent to upgrade their entire pipeline system in southern Pennsylvania. This is evinced by their statements made by Bill Yardley, group vice president of Spectra Energy, where he stated " The TEAM expansion program offers the opportunity for moving emerging natural gas supplies from the growing Marcellus and Utica shale plays in the Appalachian supply basin to premium markets in the Northeast."[15] (emphasis added). Such a statement clearly demonstrates Texas Eastern's intent on fully upgrading their pipeline system in southern Pennsylvania. Such a conclusion is further solidified by FERC approval of an earlier Texas Eastern Project upgrading this very system, the TEAM 2012 Project. FERC has improperly chosen to evaluate the series of projects in isolation; FERC must initiate a comprehensive *corridor wide* review to examine the impact of upgrading Texas Eastern's entire system in Pennsylvania. NEPA demands that a proper review of the environmental impacts of such upgrades occurs. Currently, there are no regulatory agencies at the regional, state, or national level that could require such a corridor wide examination of the environmental impacts resulting from the completion of these segmented projects.

The Federal Energy Regulatory Commission has previously relied upon the faulty assertion that because these projects are designed to serve different customers, at different points in time, they have independent utility, and thus warrant individual review. Such an argument improperly rests entirely on the *economic* independent utility of each project. Taken to its logical conclusion, this argument suggests that if a project sponsor could find individual shippers interested in small volumes of gas that would require only half-mile stretches of looped pipeline

[15] *See* http://killajoules.wikidot.com/blog:2367

along an existing pipeline, FERC could certificate each one of those small individual half-mile loops. Thus, under those circumstances, FERC could theoretically certificate over 400 individual projects along Texas Eastern's system. Such a result undermines the design, purpose, and intent of NEPA.

IV. Alternatives Analysis

The final section of the Environmental Assessment provides an Alternative Analysis that is severely deficient. As part of that analysis FERC must provide evidence that there are no other pipeline systems that currently have existing capacity that could satisfy the contractual volumes of gas. If such capacity existed FERC would likely require that the Project be reevaluated. However, FERC unlawfully did not identify all other pipeline systems that could be *upgraded* to satisfy the shipping volumes in the contract.

As part of this analysis, FERC would simply provide a basic evaluation of what an upgrade to a competing pipeline's system would involve, and make a determination of whether or not such an upgrade would be environmentally preferable to the proposed Project. Pipeline siting is highly variable based on such factors as the presence of steep slopes, wetlands, watercourses, viewsheds, airsheds, and forest health etc. Any analysis absent these factors is deficient, and any blanket statements that relocating the upgrade to another system would not result in significant environmental advantages is also deficient. Such a regime ensures that the pipeline expansion projects proceed in the most logical sequence, with the least amount of environmental impact.

V. Future Plans and Expansion Activities

Texas Eastern has submitted information suggesting that connecting pipeline loops and closing off gaps in existing lines increases the hydraulic efficiency of the system. See Resource Report 10. Because such efficiencies are acknowledged to exist, and impact Project design, Texas Eastern should identify where on its system the next most logical upgrades would be

constructed in order to best improve the efficiency of the system. Further, both FERC and Texas Eastern have hydraulic modeling software that can predict where the next upgrade on the system will occur. This information should be made available to the public and be part of the environmental review for the project.

VI. Flow Velocity and Flow Diagram Data

The data that have been submitted have detailed the maximum operating pressure ("MAOP") for the proposed Project; however, *nowhere* in the Resource Reports or Environmental Assessment appear any data or analysis concerning the maximum *flow velocity* of the gas for the proposed pipeline Project. The Tennessee Gas Pipeline Company has stated in the Environmental Assessment for their Northeast Upgrade Project that the highest safe flow velocity for operation of the line it installed is 40 feet per second. Because FERC has not required that Texas Eastern to submit similar data detailing generally what the maximum safe operation limits are for flow velocity on its system, what the flow velocity is within the current system, and what the flow velocity will be in its proposed Project for each of the loops it is impossible to whether or not the upgrades pose long term safety threats as a result of internal erosional velocity of entrained particles in the system. Without this data, and the subsequent analysis by FERC the Environmental Assessment is unlawful.

VII. Wetlands Conversion

Texas Eastern's Project will require the conversion of Forested Wetlands into Emergent Wetlands. The Bureau of Forestry at the Pennsylvania Department of Conservation and Natural Resources has found that converting a Forested Wetland into an Emergent Wetland is an adverse impact on that water resource.[16] FERC has not made a clear determination on whether or not FERC considers such a conversion to be adverse. This evaluation should provide a detailed

[16] *See*, Comment of DCNR Bureau of Forestry under CP09-444 (March 29, 2010) (accession number 20100329-5091).

analysis on wetland characteristics including, but not limited to: impacts to aquatic wildlife and habitat, wetland temperature variation, and hydrogeology and hydrology impacts. The evaluation should also include and rely upon peer reviewed studies that support the finding. Without such a finding the Environmental Assessment is unlawful. Further, to the extent that any Exceptional Value wetlands in Pennsylvania are converted, FERC cannot approve the project as it violates the underlying Water Quality Certification.

VIII. Environmental Inspectors

Currently, the way in which the third-party environmental inspector for pipeline projects is chosen creates perverse incentives whereby the environmental inspectors have serious conflicts of interest in rigorously enforcing the terms and conditions of the FERC Certificate. The process for choosing a third-party environmental inspector first involves the project sponsor providing FERC with the names of three different consulting firms. FERC may then choose one of the three consulting firms for the job, or FERC may reject all of the consulting firms and ask the project applicant to resubmit additional choices. Requesting the project applicant to submit choices for consulting firms incentivizes the consulting firms to have increasingly close relationships with the project sponsor. It is unlikely that a consulting firm that developed a reputation for diligently and impartially enforcing the terms and conditions of the Certification would be chosen by a project applicant.

This procedural problem is highlighted by the fact that *not once* in the history of the Federal Energy Regulatory Commission, has an environmental inspector ever cited a violation of a Certificate term or condition that has resulted in an administrative penalty or fine being issued to the project applicant. In order for the impartial and rigorous evaluation of project construction activity compliance, the Texas Eastern must be excluded from the process of choosing who will oversee project compliance. Until such changes are made the Environmental Assessment and its ensuing conditions cannot be properly enforced.

Dated: Oct. 16, 2013

Respectfully submitted,

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