October 12, 2012

Erin Schumacher
Mail Code 401-03
Department of Environmental Protection
Division of Water Supply & Geoscience
P.O. Box 420
Trenton, NJ 08625-0420

Re: Public Comment – Tennessee Gas Pipeline Company, LLC, Application No. 1299D

Dear NJDEP:

The Delaware Riverkeeper Network would like to request a public hearing on the Tennessee Gas Pipeline ("TGP") Application No. 1299D to divert water from trenches, wells and wellpoints in Montague Township, Sussex County, New Jersey.

In addition, we submit the following comments on behalf of Delaware Riverkeeper Network ("DRN") and urge you not to grant the requested permit.

This is an application to the New Jersey Department of Environmental Protection ("NJDEP" or the "Department") for the approval of the diversion of up to 246.62 million gallons of water during any month (mgm) at a maximum rate of 5,524 gallons per minute (gpm) from trenches up to 8 feet in depth and the Delaware River for Horizontal Direct Drilling. The purpose of the application is to facilitate the installation of new gas pipeline, a section of the Tennessee Gas Pipeline Northeast Upgrade Project ("NEUP" or the "Project").

The Water Diversion Application as a Whole is Premature and Improper as Numerous Permits for the Project Remain Outstanding or Have Been Deemed Deficient

The Northeast Upgrade Project, the subject of this permit application, needs approval by a number of federal and state agencies before it is able to move fully forward. As detailed below, numerous permits either remain outstanding or have been cited as deficient by the reviewing regulatory agency. The Department should not grant this permit for diverting water for pipe installation as there are serious questions as to whether the NEUP will move forward at all, and

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even if it is to move forward, there are substantial questions as to whether or not there will be considerable modifications to the Project as a result of permitting failures/alterations. Therefore, to grant the requested permit at this time for this aspect of the work is premature.

FERC is the lead federal agency reviewing the NEUP. A coalition of environmental groups (including the Delaware Riverkeeper Network, the New Jersey Highlands Coalition, and the New Jersey Chapter of the Sierra Club) have obtained intervenor status before FERC, and are currently appealing FERC's environmental analysis and approval of the Project through a formal request for rehearing. This appeal includes challenging the Project's underlying supporting documents, including TGP's Environmental Construction Plan. The Environmental Construction Plan is one of the very documents relied upon by the Department in its review of this application.

Intervernors are seeking a rehearing and rescission of FERC's Certificate of Public Convenience and Necessity because the underlying environmental review fails to meet the requirements of the National Environmental Policy Act ("NEPA"). Intervenors challenge seven specific errors that require FERC to revoke the permit and rectify its deficient NEPA analysis. These errors include:

1) FERC erred in unlawfully segmenting consideration of the NEUP's environmental impacts from those of inter-dependent projects on the Eastern Leg of the 300 Line.

2) FERC erred in not treating the NEUP as a major new pipeline project necessitating an EIS.

3) FERC erred in concluding that the NEUP would not have a significant impact on the quality of the human environment and that an EIS is not warranted.

4) FERC erred in concluding that its cumulative impact analysis for the NEUP is sufficient.

5) FERC erred in concluding that the mitigation measures prescribed in the EA, and incorporated into the Order, will be fully complied with and will be sufficient to avoid significant adverse impacts.

6) FERC's EA erred in failing to adequately analyze and consider reasonable and viable project alternatives.

7) FERC erred in concluding that certification of the NEUP is required by the public convenience and necessity.

FERC has issued an order granting an extension of time for further consideration of the issues cited in the pending rehearing requests. TGP's application for their dewatering permit before this Department relies on many of the same documents and best management practices that are

currently being challenged as being incomplete and deficient. The Department's premature approval of this application would not only rely on fundamentally flawed data, but would waste the time and resources of the Department if the challengers are successful in their appeals.

TGP is also required to obtain Pennsylvania Chapter 105 Water Obstruction and Encroachment Permits (which are jointly issued by the Pennsylvania Department of Environmental Protection ("PADEP") and the Army Corps of Engineers, with the Clean Water Act 404 individual permit). Currently, this joint permit is still pending before the Army Corps of Engineers and is not imminent. The permit involves regulatory controls regarding a number of the Project's proposed water crossings. This permit includes consideration of approval of a crossing of the Delaware River itself, the very substance of this dewatering permit. As the Army Corps has yet to approve the water crossing permit, the Department should withhold further consideration of the instant application.

Further, the Delaware River Basin Commission ("DRBC") is currently considering a petition that would require it to review and approve a large section of the NEUP before the Project would be allowed to proceed to construction – that portion that lies within the boundaries of the Delaware River Watershed. The Delaware River Basin Compact and the DRBC's Rules of Practice and Procedure make clear in numerous instances that review of pipelines which pass through any portion of the Delaware River Basin require review and approval by the DRBC before lawfully proceeding to construction within the Basin. Providing permits for the NEUP before the DRBC is able to conduct its review process, a process which could result in dramatic changes for how or if the project is able to proceed, is a potential waste of NJDEP's limited resources.

In addition, a number of state permits for the NEUP have either been deemed deficient, or are currently pending before a regulatory agency. Until such time that these permits are properly approved, the NJDEP should withhold further consideration of the permit application. For example, the New Jersey Department of Environmental Protection has found that TGP's flood hazard and wetlands permit applications for Loop 325 of the project are technically deficient, and the permits are not pending before the agency at this time. And, the Department has also indicated that TGP has not received yet received its wetlands permit for Loop 323 of the Project. Until these issues are addressed the Department should not issue the requested permit.

The Pike County Conservation District ("PCCD"), acting within its delegated authority under PADEP, has twice determined that the existing application for an Erosion and Sediment Control Permit for the Project was deficient. In the first application the PCCD found that it was "*inadequate* for erosion and sediment pollution control and does not meet the minimum requirements of the Department of Environmental Protection's (DEP) rules and regulations, Chapter 102, Erosion and Sediment Control and the Clean Streams Law." (emphasis added) A letter submitted by PCCD to the PADEP provided 62 comments, over the span of 12 pages, identifying numerous deficiencies in TGP's permit application. These comments include deficiencies with respect to "Chapter 102 provisions for minimizing earth disturbance, riparian buffer protections, construction sequencing, site stabilization and Chapter 93 Antidegradation requirements." Recently, TGP resubmitted its application and *again* PCCD found the

application to be inadequate and deficient. The Department should not grant TGP's permit application for diverting water for pipe installation not only because TGP has demonstrated that is either unwilling or incapable of fully complying with the conditions required to receive a permit, but also because – similar to the ESCGP-1 permit – the instant permit fails to adopt adequate environmentally protective measures.

For the aforementioned reasons, the Department should deny approval of the permit application, or at the very least suspend further review of the application, until all federal and state permits, and DRBC dockets, have been properly issued and become final.

TGP's Application is Substantively Deficient Because of Numerous Failures to Institute Best Management Practices that are Environmentally Protective

A number of the techniques, procedures, and best management practices cited by TGP in their dewatering application for the Project are not sufficiently environmentally protective. Until changes are made to the application that correct these deficiencies, the permit must be denied. Many of the deficiencies cited below reflect comments DRN submitted to FERC for changes FERC has proposed to their Upland Erosion Control, Revegetation and Maintenance Plan and Wetland and Waterbody Construction and Mitigation Procedures, FERC Docket Number AD12-2.

In section 1.3 (Best Management Practices) of the supporting documents for the application, TGP states that, "in the vicinity of a wetland or waterbody, water will be pumped into a filter bag or through a structure composed of sediment barriers. When using filter bags the hose will be secured to the bag with a clamp and the unit will be inspected by the EI before dewatering activities commence." However, to be sufficiently environmentally protective this provision must include a requirement that the device (i.e., pump water filter bag) be placed on a stabilized surface at least 50-feet from the top of any defined bank of any waterbody. (*See* Exhibit A, DRN Comment on FERC Plans and Procedures, Section V.B.11.). No such requirement is currently contained within the application material. The supporting documents for the application furthermore state that "[d]ewatering structures will be removed as soon as possible upon completion of dewatering activities." The application should define a specific time period within which TGP must remove the dewatering structure. Use of the term "as soon as possible" is not sufficiently specific to be adequately protective. Unless a baseline schedule is established in the conditions of the permit, TGP will have the opportunity to leave dewatering structures in place well beyond their intended use. (*See* Exhibit A, DRN Comment on FERC Plans and Procedures, Section V.B.11.). This is particularly a concern where TGP would have monetary incentives to leave the structure in place.

Section 1.3 also states that "Tennessee will discharge all trench water to ground across appropriate dewatering structures which generally consists of rip rap and hay or straw bales to minimize off-site migration of suspended sediments." First, TGP's goal should be to *eliminate* off-site migration of suspended sediments – not just "minimize." The permit application must reflect this reality. Second, hay is a primary source of weed seeds, and it is difficult to determine if it is truly weed-free, thus it is not an adequate technique for proper erosion control.

Additionally, straw bales are not effective as temporary slop breakers. They tend to float and are ineffective as velocity reducers. These methods must be eliminated from the permit application. (*See* Exhibit A, DRN Comment on FERC Plans and Procedures, Section IV.F.1. & 3).

Additionally, in Section 1.3 it states that "upon installation of the pipe, dewatering structures will be removed, the pipeline trench will be backfilled, and the existing contours and vegetation restored." This section of the application material is inadequately protective as it fails to state a limit on how long an exposed trench can remain open, or any limits on the length of a trench that can be open at one time. This is a critical issue that needs limits. For example, standard practice for utility installation (e.g. water lines, sewer lines) limits trench excavation to the length that can be backfilled within one day. (*See* Exhibit A, DRN Comment on FERC Plans and Procedures, Section IV.F.2.).

Throughout the application TGP cites the fact that Environmental Inspectors "will conduct periodic inspections" and ensure compliance. However, the standard cited by the Federal Energy Regulatory Commission for the qualifications of these Environmental Inspectors is wholly inadequate. FERC states that "The number and experience of Environmental Inspectors assigned to each construction spread should be appropriate for the length of the construction spread and the number/significance of resources affected." Nowhere does FERC provide a specified level of training, experience, or credentials for their inspectors. Such a requirement would reduce the likelihood of improper or inconsistent application of regulations. The term "appropriate" in their current regulations does not provide adequate guidance for the requisite experience level of an inspector. The Department cannot rely on such specious standards for assurance of proper compliance. (*See* Exhibit A, DRN Comment on FERC Plans and Procedures, Section III.A.).

There have been numerous potentially improper and inconsistent categorizations of pollution events by FERC inspectors during the recent construction of two large scale pipeline projects (the Tennessee Gas and Pipeline Company's 300 Line Upgrade Project and the Columbia 1278k Replacement Project). These inconsistent categorizations and results are a direct consequence of poorly designed standards for evaluating the credentials and experience of inspectors.

Lastly, not only does TGP's application reflect a failure to institute Best Management Practices throughout its application, but in addition the application is rife with technical errors. For example, Section F of TGP's application indicates that the estimated dewatering start date is June 2013. However, this directly conflicts with the conditions and parameters that have been established by the DRBC for water withdrawals for this Project. The DRBC has made it clear that a withdrawal "shall not occur during the spawning season (May 1 to June 30)."[1] This mistake in the application must be remedied by TGP before it is considered by the Department for approval. Furthermore, TGP commits an additional error when it states in Section 2.4 of its HDD Contingency Plan that "Tennessee will plan to schedule construction during the months when historical data indicates lower streamflow." TGP's application indicates that it expects to begin dewatering for the purposes of construction in June and finish in August, however, USGS records indicate that August and September are the months with the lowest daily discharge in

[1] DRBC Docket Number D-2011-022-1, available at http://www.state.nj.us/drbc/library/documents/dockets/071112/2011-022-1.pdf).

cubic feet per second (*See*, Exhibit B, USGS 01438500 Delaware River at Montague NJ). TGP must reconcile this discrepancy before the permit application is considered by the Department.

These are but a few of the numerous best management and technical failures that are included in TGP's application. Until these deficiencies have been adequately addressed, the Department must not approve this permit application.

TGP's Continuous and Systemic Compliance and Regulatory Failures Strongly Weigh Against Approval of the Application

Not only is consideration by the NJDEP of this permit application premature, and the substance of the permit technically deficient, but the permit is being sought by an operator with a history of flagrant and continuous noncompliance with regulatory controls

The high frequency of violations, at both the state and federal levels, demonstrate that there are continuous and systemic failures in TGP's compliance with regulatory controls. As such, the NJDEP should not allow TGP to move forward with its docket until such time that TGP comes into full compliance in its previous project (300 Line Upgrade Project), and the Department is assured that TGP has in place the systems and protocols necessary to avoid future violations, including within New Jersey.

In November 2011, TGP put into service the 300 Line Upgrade Project, a pipeline construction project similar in design and scope to the currently proposed NEUP. While the 300 Line Upgrade is already operational, TGP's numerous and ongoing failures to conform to the terms and conditions of its permits for the 300 Line Upgrade Project support a conclusion that the NJDEP should deny TGP's current application.

These compliance failures include numerous violations reported by the Conservation Districts in Pike, Wayne, and Susquehanna counties. In Pike County alone, no fewer than 20 Notices of Violations (NOVs") have been reported, which include at least: 17 instances of dirt and sediment being discharged into water bodies, 7 violations for worksite conditions, and 21 instances of failure to properly institute Best Management Practices for erosion and sediment control. In Wayne County, out of 16 inspections conducted by the County Conservation District during the 300 Line Upgrade Project, 15 violations were found. The number of past violations amassed in Pike County, and the startling 93% failure rate in Wayne County, provide strong evidence of chronic compliance failures by TGP.

Additionally, TGP has continued to accumulate NOVs from Conservation Districts. Although the 300 Line was put into service in November 2011, much of the right of way involved in the project has yet to be sufficiently stabilized and revegetated, in violation of applicable permit requirements. On March 8, 2012, employees of DRN observed two construction sites presenting pollution concerns. DRN staff observed piles of unconsolidated dirt with inadequate straw layers and mulching, as well as bare unconsolidated soil on the sites, both of which could directly lead to sediment discharges into waters designated as high quality waters under the Clean Streams Law.

After making these observations, DRN staff notified the Pike County Conservation District ("PCCD") of the ongoing permit violations. On March 15, 2012, PCCD issued an additional NOV to TGP. The NOV stated:

> The inspection(s) revealed that earth disturbance activities at the TGP 300 Line site are in continued violation of the Rules and Regulations of the Department and the Clean Streams Law. Additional violations were documented on inspection reports dated June 22, 2011 (IR 11-01), July 26, 2011 (IR 11-04), August 15,2011 (IR 11-05), August 24, 2011(IR 11-06), August 31,2011 (IR 11-07), September 10, 2011 (IR 11-08), September 13, 2011 (IR 11-09), September 16-17, 2011 (IR 11 -10), September 20 & 21,2011 (IR 11-11), September 26, 2011 (IR 11-12), September 28, 2011 (IR 11-13), October 5, 2011 (IR 11-14), October 14,2011 (IR 11-16), October 20, 2011 (IR 11-17), November 3rd and 4th, 2011 (IR 11 -18), December 12, 2012 (IR 11-19) and February 15, 2012 (IR 12-20).

Furthermore, on April 14, 2012, PCCD issued an additional NOV for TGP's failure to implement effective Erosion and Sediment Control Best Management Practices and to install erosion control matting, causing sediment or other pollutant discharges into waters of the Commonwealth.

In addition to TGP's violations of state issued permits, FERC's inspections of the work being done on the 300 Line Upgrade Project also suggest that TGP has chronic problems with regard to regulatory compliance. During the 300 Line Upgrade Project, in 28 out of 38 "Environmental Compliance Monitoring Program Weekly Summary Report[s]" that were provided on FERC's website, there was at least one recorded incident where construction activity did not come into "compliance with Project specifications, mitigation measures, and applicable FERC-approved Project plans." Additionally, there were also at least 10 separate instances where an inspector in his "Environmental Compliance Monitoring Program Weekly Summary Report" indicated that a noncompliance report would be filed at a later date, but where the inspector failed to file a noncompliance report with FERC (and no reason was provided for the failure to issue that report in the following week's report). These 10 separate instances indicate that either FERC has maintained incomplete records for the project, or there were multiple failures to follow up on potentially enforceable noncompliance matters by FERC-sanctioned environmental inspectors.

If the NJDEP approves the docket without having evaluated the environmental ramifications and compliance failures of the 300 Line Upgrade, the Department risks, if not invites, similar compliance failures and further environmental damage to New Jersey. Susan Beecher of the PCCD has been quoted regarding TGP's 300 Line Project as saying, "[t]he things we see go wrong are the same stupid mistakes over and over again. I do not trust the contractor and company to manage this project."

Therefore, it is entirely premature for the Department to approve the pending permit request at this time before TGP has demonstrated that it has the ability, and the will, to comply fully with all permit terms and requirements imposed for water and resource protection.

Conclusion

We respectfully request that the New Jersey Department of Environmental Protection deny the Permit Application No 1299D for the Tennessee Gas Pipeline Company, LLC, to divert water from trenches, wells and wellpoints in Mantague Township, Sussex County, New Jersey.

Sincerely,

Maya van Rossum
the Delaware Riverkeeper

Exhibit A

October 9, 2012

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

RE: Delaware Riverkeeper Network Comments to FERC's Upland Erosion Control, Revegetation and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures), Docket Number AD12-2-000.

Dear Secretary Bose:

On behalf of the Delaware Riverkeeper Network, please consider the following comments on the Federal Energy Regulatory Commission's ("FERC" or the "Commission") update to the Upland Erosion Control and Revegetation and Maintenance Plan ("Plan"), and the Wetland and Waterbody Construction and Mitigation Procedures ("Procedures"), Docket Number AD12-2-000. The Plan and Procedures are referred to at 18 C.F.R. § 380.12(i)(5) and § 380.12(d)(2), respectively, as well as 18 C.F.R. § 157.206(b)(3)(iv).

I.) The Draft Plan and Procedures as Proposed are Inadequate and Not Supported by the Best Available Evidence and Standards.

The Delaware Riverkeeper Network ("DRN") has concluded that FERC's draft Plan and Procedures, as proposed in the docket, provide inadequate guidance for the effective protection of human health and the environment from the detrimental impacts of pipeline construction activity. DRN was dismayed to see that many of the scoping comments and suggestions submitted in our January 18, 2012 letter to the Commission were not addressed in the current draft. DRN urges that the comments and recommendations provided below will be reviewed and considered by the Commission in its adoption of these guidance documents.

Additionally, DRN is concerned that the Commission's current draft proposal fails to include a rationalization for many of the proposed changes. For example, the section dedicated to "Stormwater Pollution Prevention Plans" (formerly section III.G of the Plan) was entirely discarded without any explanation. The Commission must provide a reasonable justification as to why this section was excised from the Plan and not replaced with an equivalently protective measure. The Plan and Procedures include many other instances wherein changes were made

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without any explanation as to how or why such changes improve the way in which the regulations protect human health and the environment.

Additionally, the Commission has failed to include, *or even cite*, any scientific or technical evidence that supports any of the changes made in the drafts. Such a glaring omission demonstrates that the draft Plan and Procedures is not supported by the best available evidence. The Commission should provide for public review and comment both an explanatory document fully detailing the changes made to the drafts, and the scientific and technical recommendations that are being relied upon to justify the changes in the drafts. After these documents have been provided the draft Plan and Procedures should be re-noticed and issued for a second round of public comment.

II.) Specific Section Comments for the Upland Erosion Control, Revegetation and Maintenance Plan

Section I.A.2. – "is necessary because a portion of this Plan is infeasible or unworkable based on project-specific conditions;"

> Comment: The Commission must specifically define the terms "infeasible" and "unworkable" in this section. Such vague terminology provides operators with unchecked latitude, allowing them to take advantage of the Commission's process in order to receive variances that may be harmful to human health and the environment. A more specific description based on an identifiable standard should be included.

Section I.A. – A provision should be added in this section addressing the following comment.

> Comment: The Plan should articulate a clear process in this section for FERC to obtain input from local soil conservation districts, as well as state environmental protection agencies, before approving variances. In this section, the Commission should also limit the number and scope of variances allowed on a per-project basis. Local and state agencies are best situated to provide useful comments on the environmental ramifications of significant variances, and these variances should not be able to move forward without this well-informed input.
>
> The Plan should also outline a process for receiving public input and comments for potential variances (particularly level three variances). The current regulations do not require, or even provide the opportunity for, any public input on requested variances. The current draft invites situations wherein numerous variances are requested and approved with no input from any institution or the public, which fundamentally alter the environmental impact contemplated in the Project's Environmental Assessment. This process unnecessarily exposes human health and the environment to potentially dangerous and destructive construction activities.

Section II.A.1. – "The number and experience of Environmental Inspectors assigned to each construction spread should be appropriate for the length of the construction spread and the number/significance of resources affected."

Comment: The Plan should require a more specified level of training, experience, or credentials for the inspectors. This would reduce the likelihood of improper or inconsistent application of the regulations. The word "appropriate" in the current draft does not provide adequate guidance for the requisite experience level of an inspector. There should be objective standards (i.e. specific licenses, years of experience, education level, environmental training programs, local knowledge, etc.) outlined in the Plan as a baseline for inspector approval.

There were numerous potentially improper and inconsistent categorizations of pollution events by inspectors during the recent construction of two large scale pipeline projects (the Tennessee Gas and Pipeline Company's 300 Line Upgrade Project and the Columbia 1278k Replacement Project). These inconsistent categorizations and results are a direct consequence of poorly designed standards for evaluating the credentials and experience of inspectors.

Section II.A.1. – A provision should be added in this section addressing the following comment.

Comment: The Plan should articulate how the extent of a "spread" is determined.

Section II.A.3. – "Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the Certificate, stipulations of other permits or approvals . . ."

Comment: Currently, inspectors only have the power to issue stop-work orders (a power that is very rarely exercised). This section should include strengthened authority that includes a mandate for inspectors to issue noncompliance notices that would result in fines to the associated project sponsor. The fines should be allowed to be levied immediately. If a payment is delayed, the inspectors should have the authority to then immediately issue a stop-work order. An example of such a provision is provided in the Environmental Protection Agency's Model Ordinance for Erosion and Sediment Control:

> *"No person shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill, or cause the same to be done, contrary to or in violation of any terms of this ordinance. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and each day during which any violation of any of the provisions of this ordinance is committed, continued, or permitted, shall constitute a separate offense. Upon conviction of any such violation, such person, partnership, or corporation shall be punished by a fine of not more than $ _____ for each offense. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this ordinance shall be required to bear the expense of such restoration."*

(*See* DRN Scoping Comment, Exhibit 3, Model Ordinance to Protect Local Resources, EPA).

An example of the inadequacy of FERC inspectors' current level of authority – which went unchanged in the draft Plan and Procedures – can be gleaned from a review of inspection reports and construction activity reports for two large scale pipeline projects

(the Columbia 1278 Replacement Project and the Tennessee 300 Line Project). During the 300 Line Extension Project, in 28 out of 38 "Environmental Compliance Monitoring Program Weekly Summary Report" that were provided on FERC's website there was at least one recorded incident where an activity did not come into "compliance with Project specifications, mitigation measures, and applicable FERC-approved Project plans." This 73% failure rate demonstrates that there were systemic and continued failures in TGP's compliance with regulatory controls, which suggests improper oversight, and or, inadequate regulatory enforcement. Even worse, during the Columbia 1278 Replacement Project, in each "Environmental Compliance and Inspection Report" the inspection summary indicated that there were "construction/restoration problems" and that "construction/restoration was unsatisfactory."

Providing FERC inspectors with the authority to immediately levy fines, and issue stop-work orders for violations of these regulations would incentivize operators to follow best management practices in the first instance, thereby reducing the likelihood that they will be repeat offenders.

Section II.A. – A provision should be added in this section addressing the following comment.

Comment: Inspectors should be free of all contractual issues or limitations that may impede or prevent them from properly issuing fines or stop-work orders. This freedom from conflicts of interest should be outlined in the Plan, as there currently is no such provision.

Section II.B. – A provision should be added in this section addressing the following comment.

Comment: A clear delineation between the responsibilities of Army Corps inspectors and the FERC inspectors should be articulated in the Plan and Procedures. Such guidelines in the Plan and Procedures would better indicate who is directly responsible for corrective actions, how quickly they should occur, and who is ultimately responsible if they do not occur, and or, are delayed.

Section II.B.14. – "Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow"

Comment: The Commission must more specifically define the term "as soon as conditions allow" in this section. Such vague terminology provides operators with the opportunity to delay repairing temporary erosion and sediment control measures without meeting an identifiable standard for the delay.

Section II.B. – A provision should be added in this section addressing the following comment.

Comment: In the construction Status Reports that are required to be submitted by the operators, the operators should be required to publish as exhibits to each report any copies of correspondence received by the operator from and federal, state, or local permitting agency concerning instances of noncompliance of the operator. The operator should also be required to keep and publish a running tally of instances of noncompliance from these permitting agencies.

Section II.B. – A provision should be added in this section addressing the following comment.

> Comment: Environmental inspectors should also be required to send electronic and paper copies detailing each instance of noncompliance to all other federal, state, and local permitting authorities. This communication should be made within 48 hours after the noncompliance issue has been identified and reported by the FERC inspector.

Section III.A.2. – "Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of certificated work areas."

> Comment: The use of the term "encourage" renders this entire provision toothless. The Plan should provide a more specific requirement for expanding surveys in areas where there is a possibility that a variance will be requested. For example, the Plan should require that unless the survey has been completed a variance cannot be requested. The use of such ineffectual terminology should be discouraged throughout the Plan.

(Former Section G.) – Stormwater Pollution Prevention Plan.

> Comment: The Commission must explain why this entire section – detailing a very important part of the Plan – has been completely excised from the regulations. Unless an equally protective section is added to replace former Section G, the Plan and Procedures proposed are demonstrably inadequate and not supported by the best available evidence.

Section III.G. – For all residences located within 50 feet of construction work areas, project sponsors shall: not remove mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; ensure that construction equipment and materials, including the spoil pile, remain within the construction work area; and restore all lawn areas and landscaping within the construction work area, consistent with this Plan, immediately after backfilling the trench.

> Comment: This new section is not clear if the 50 feet setback is intended to be from the property line or 50 feet from the residence (structure) itself. If it is 50 feet from the structure it is too close, if damage occurs to the root system of mature trees the homeowner is likely to lose the tree and incur the cost of tree removal. More specific technical guidance (or reference to guidance) is needed for tree protection because if they leave a mature tree in place but damage it, the homeowner is damaged as well as now bearing the threat of a safety hazard that could be unknown to them as the tree slowly dies. Additionally, there could be many other issues working this close to a residence, including damage to such things as utilities, on-site septic systems, and wells. This section of the plan, as proposed, does not provide proper guidance.

Section III.I. – "The plan shall address winter construction procedures (e.g. snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, and topsoil stripping), stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g. mulching and erosion controls, inspection

and reporting, stormwater control during spring thaw conditions), and final restoration procedures (e.g. subsidence and compaction repair, topsoil replacement, and seeding)."

Comment: The Plan should articulate more specific requirements and standards for the winter construction plan. There is no guidance on who approves the plan. Will the plan be made publically available before it is approved? Is there a process for public input? What details need to be submitted, and what standards will apply to determine if the winter construction plan is sufficiently protective? All of these questions must be answered in this section.

Additionally, the Plan should indicate the specific dates that are considered winter (i.e. Oct 15 – Apr 15) for different regions, or require that the Winter Construction Plan define the dates. Winter work should have a limited disturbance footprint (i.e. no more than 1 acre at a time "exposed" without stabilization) and a limited timeframe for areas to be exposed (i.e. 15 day maximum). A phasing plan should be included, and an area should meet specific criteria for stabilization before work begins on the next area.

This section should also include requirements for previously disturbed areas that have not achieved a sufficient level of vegetative cover (i.e., 85%) by beginning of winter. There are a number of other requirements common to cold weather states that should be addressed in the winter construction plan, and specific guidance is needed, not just an open-ended requirement for a plan:

- Mulch or erosion control mix should not be placed over snow.
- Higher mulching rates are required in winter (usually twice the amount of mulch)
- Stockpiles should receive additional protection during winter
- Stockpiles cannot be within a certain distance of waterways or wetlands (i.e. 100 feet)
- Material excavated during frozen conditions should not be mixed or stockpiled with other material.
- Sediment barriers (i.e. compost socks) must be properly embedded during frozen conditions.

It is very difficult to maintain good erosion and sediment control in winter conditions, and work should not be allowed to occur within a certain distance of sensitive water features.

Section IV, includes details on many of these issues. Each sub-section in IV should provide specific winter criteria for these items.

Section IV.A.2. – "However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval . . ."

Comment: This provision should read, "non-wetland areas **and forested areas**" (this language parallels the rest of paragraph). But in fact we would not support a provision

that allows expansion of a construction right of way in forested areas at the discretion of the pipeline company. Forests are critically important for preventing water pollution, air pollution, noise pollution, and runoff that can contribute to flooding and erosion, forest also provides critical habitat with the habitat implications of a loss of forest expanding beyond just the immediate land area deforested. Any expansion of the right of way into forested areas must be prohibited without the explicit review, approval and permitting of all appropriate authorities.

Section IV.B.3.b. – "in soils with less than 12 inches of topsoil make every effort to segregate the entire topsoil layer."

Comment: The use of the term "every effort" renders this entire provision meaningless. The Plan should articulate clear and identifiable standards that can be effectively enforced by FERC inspectors. The use of ambiguous language – such as "every effort" – only acts to hinder proper protection of human health and the environment.

Section IV.B. – A provision should be added in this section addressing the following comment.

Comment: The following requirements need to be added to Section IV.B:

- Topsoil should NEVER be allowed to leave a site.
- Topsoil should ALWAYS be segregated, not just in the locations listed. Successful restoration depends upon it.
- Topsoil importation should not be allowed in residential areas or anywhere. This allowance will encourage movement of topsoil to residential areas from other non-residential pipeline areas (to the detriment of those areas).
- Movement of topsoil is a source of weed and invasive seed material, and for this reason alone should be prohibited.

Section IV.C.2. – "Probe all drainage tile systems within the area of disturbance to check for damage."

Comment: The Plan should identify how often surveys need to be done to examine for potential damage to drainage tile systems.

Section IV.E. – A provision should be added in this section addressing the following comment.

Comment: If tracked vehicles or heavy equipment is required to enter a roadway, a stabilized construction entrance should be required.

Section IV.F.1.b. – "Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion."

Comment: The use of the term "excessive" renders this entire provision meaningless. The word "excessive" should simply be eliminated.

Section IV.F.1. & 3. – A provision should be added in this section addressing the following comment.

> Comment: Weed free hay should not be an option. Hay is a primary source of weed seeds, it is difficult to determine if it's truly weed-free, and high quality hay is expensive. Only straw should be permitted.

Section IV.F.1. & 3. – A provision should be added in this section addressing the following comment.

> Comment: Straw bales are not effective as temporary slop breakers. They tend to float and are ineffective as velocity reducers. This method should be eliminated from the Plan.

Section IV.F.2. – "Temporary trench plugs are intended to segment a continuous open trench prior to pipeline installation."

> Comment: This section of the Plan is inadequately protective as it fails to state a limit on how long an exposed trench can remain open, or any limits on the length of a trench that can be open at one time. This is a critical issue that needs limits. For example, standard practice for utility installation (i.e. water lines, sewer lines) limits trench excavation to the length that can be backfilled within one day.

Section IV.F.4. – A provision should be added in this section addressing the following comment.

> Comment: More specific language on the use of mulch binders, specifically the use of polyacrylamides. This material is being heavily marketed and its impacts on both water bodies and soil ecology are uncertain. The research is limited and the use of this material should be approached with caution until full environmental impacts and benefits are understood. Guidance on application rates are required, and effects on revegetation areas, soil health, etc. need to be understood before it is approved in the Plan.

Section V. – Provisions should be added in this section addressing the following comment.

> Comment: This entire section is severely deficient. It would be well served by a Guidance Document / Manual, and there are a number of sources to draw on for this material. Most importantly, "restoration" is not defined in terms of soil content, soil compaction, amount and type of cover, plant health, plant species, restoration of topography, restoration of wildlife corridors, size of "woodland areas" and increase in edge conditions, and hydraulic conductivity to wetlands and water bodies. Clear and quantifiable parameters are needed for "restoration", with supporting timeframes for evaluation and remedial action.

Section V.A.1. – "If construction will unexpectedly continue into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file a winter construction plan (as specified in section III.I)."

Comment: if there are no requirements for the timeframe of trench backfill, material can remain for an undefined time period. Also, the restoration periods are too long (20 days and 10 days). This work should happen concurrently with the trench backfill. Inspection requirements should also be detailed in this section. Furthermore, for unexpected winter construction, further activity should be suspended until written approval is obtained for the winter construction plan.

Section V.A.4. – "Remove excess rock from at least the top 12 inches of soil in all actively cultivated or rotated cropland and pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area should be similar to adjacent areas not disturbed by construction."

Comment: In all areas, not just agricultural and residential areas, existing conditions related to the top 12 inches of the trench and topsoil should be restored to previous and surrounding conditions (rock is not acceptable).

Section V.A.5. – "Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting."

Comment: Quantifiable parameters for "soil in proper condition for planting" are required. For example, bulk density, organic content, amount of large material, soil classification, etc.

Section V.A.6. – "Remove construction debris from all construction work areas unless the landowner or land managing agency approves otherwise leaving materials onsite for beneficial reuse, stabilization, or habitat restoration."

Comment: This should also require land-owner approval in writing.

Section V.A.7. – "Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful."

Comment: This section should clearly articulate what the parameters are for "successful revegetation", including a mandate that only native species be used. A process for final inspection and approval (in writing) by inspectors is needed.

Section V.B.1 & 2. – Provisions should be added in this section addressing the following comment.

Comment: Guidance is needed on inspection and repair specific to Trench Breakers and Slope Breakers to assure that measures are functioning as intended (i.e. wetland areas are not being inadvertently drained). The engineer or "other qualified" professional should be required to attest to their oversight and decisions regarding placement, etc. The same professional should be required to sign off regarding inspection and repair. Criteria for accepted performance should be defined (i.e., drainage is not occurring along trench, erosion is not occurring along edges of slope breakers or below slope breakers, etc.).

Furthermore, Section V.B.2.d. states that "slope breakers may extend slightly (about 4

feet) beyond the edge of the construction right of way to effectively drain water off the disturbed area." While this is not a new requirement, it is concerning from a regulatory perspective when determining the limit of permit coverage. For example, PA requires traditional construction projects to demonstrate an overall "limit of disturbance" that includes all areas where construction activity, include placement of permanent erosion control measures, will occur that becomes the legal permit boundary. Any allowance outside of a construction right-of-way without clarification of other protective requirements may lead to insufficient oversight and regulation.

Section V.C.1. – "Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests."

Comment: In all areas, not just agricultural and residential areas, soils should be protected from compaction to the maximum extent practicable. Forested soils, as they have remained undisturbed for decades, typically have low compaction rates and high organic matter. Their destruction will impact the long term ability of a site to recover and support a desired plant community. Specific testing methods and frequency should be more clearly defined; the term "at regular intervals" is insufficient. This section also requires tests to be conducted on the same soil types under similar moisture conditions in undisturbed areas to approximate preconstruction conditions; preconstruction conditions should be conducted prior or concurrent with excavation to document actual preconstruction conditions and avoid estimation.

Section V.C.2. – "Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil."

Comment: Parameters for what qualifies as "severely compacted" must be provided.

Section V.C.3. – "Perform appropriate soil compaction mitigation in severely compacted residential areas."

Comment: Parameters for "appropriate soil compaction mitigation" and "severely compacted" in residential areas must be provided.

Section V.D.1. – "The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b."

Comment: Parameters for "successful revegetation" should be provided as well as inspection and documentation of achievement of successful revegetation prior to any permit closeout action.

Section V.D.2. – "Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application."

Comment: A maximum timeframe for incorporation of soil additives should be provided. As soon as practicable leaves a lot of room for interpretation on projects with virtually unlimited disturbance areas. Furthermore, soil additives and fertilization recommendations should only be based upon written recommendations that are grounded in an approved soil test and applicable to the targeted vegetative system desired for restoration.

Section V.D.3. – A provision should be added in this section addressing the following comment.

Comment: The use of annual species seeding should be clarified to emphasize the requirement to establish native, perennial vegetation at the beginning of the next growing season. Furthermore, the Environmental Inspector should be required to document the reason for approving the use of annual species.

Section V.D. – A provision should be added in this section addressing the following comment.

Comment: The Commission makes no mention of the need to perform a pre-disturbance inventory of vegetation systems and only mentions landowner compensation for turf, ornamental shrubs, and "specialized landscaping" (undefined term). Owners of naturalized land should be compensated for the loss of structural and functional benefits associated with tree, shrub, or healthy meadow cover. The science and methodologies for determining these ecosystem and structural values are well known. The Commission must require landowner compensation for the FULL net loss of value and/or complete vegetation restoration.

Furthermore, glaringly absent from the Commission's "revegetation" plan is any mention of restoring the baseline plant communities or vegetation systems that existed on the site prior to disturbance. Erosion control is NOT restoration. Restoration involves a careful assessment of baseline conditions PRIOR TO disturbance and the identification of a "reference" community that will serve as a metric for species compositions and structural diversity

Section VII.A.1. – "Conduct follow-up inspections of all disturbed areas after the first and second growing seasons to determine the success of revegetation."

Comment: Plan should outline a general inspection schedule that should be followed absent further guidance from state or local permitting agencies.

Section VII.A.2. & 4. – Provisions should be added in this section addressing the following comment.

Comment: The Commission's standard for gauging the success of a restoration effort is wholly inadequate. The phrase ". . . similar in density and cover to adjacent undisturbed lands" is not a quantifiable metric and subject to an excessive degree of subjective judgment. The appropriate methodology of determining the success of revegetation is to quantify the species composition, cover levels and structural diversity of a local

"reference" community that is undisturbed. Duplication of that plant community to an accuracy level of greater than 90% is a reasonable metric that is frequently achieved on restoration projects across the United States.

Measurement of restoration success requires the establishment of vegetative plots both within the reference community and within the restoration area. Records need to be kept on no less than an annual basis regarding species composition and cover density levels.

Additionally, successful restoration requires several years of maintenance and monitoring to assure plant communities become properly established. This requirement has not been addressed in this plan. FERC makes no recommendations for plant survival, replacement, and acceptable mortality levels post installation.

Furthermore, given that invasive plants and biological invasion by undesirable organisms is aggravated and promoted by land disturbance and linear landscape disruptions, the absence of a mandated strategy for addressing invasive species in this document is alarming. At a minimum, FERC should require annual monitoring and species-specific interventions along each project area for the entire service life of the ROW. This is fundamentally the same as monitoring and suppressing wildfire risk – ROW construction creates ideal conditions for biological invasion of both the ROW and adjoining lands, to fail to monitor and suppress infestations with an early detection – rapid response model assures these organisms will become established and landowners will suffer negative economic and ecological consequences.

The maintenance program for addressing invasive species should limit to only those species necessary the use of herbicides including things like glyphosate. The generalized application of herbicides for weed or invasives control does not have the effective of discouraging invasives and encouraging native species; it simply kills all species with which it comes in contact merely leaving open the door for invasives to take control in the future, and in fact making that outcome easier by killing off any competing natives that could have been getting established.

III.) Specific Section Comments for the Wetland and Waterbody Construction and Mitigation Procedures

Section I.A.2 – "is necessary because a portion of this Plan is infeasible or unworkable based on project-specific conditions;"

Comment: The Commission must more specifically define the terms "infeasible" and "unworkable" in this section. Such vague terminology provides operators with unchecked latitude, allowing them to take advantage of the Commission's process in order to receive variances that may be harmful to human health and the environment. A more specific description based on an identifiable standard, such as a cost/benefit analysis, should be required.

Section I.A. – A provision should be added in this section addressing the following comment.

Comment: See Comment from Section I.A. of the Plan.

Section I.B.1.b. – A provision should be added in this section addressing the following comment.

> Comment: The minimum distance proposed (100-feet) does not take into account the slope, stability or ground cover condition with regard to hazardous material/pollution potential At a minimum, all operations that may result in spills should be performed upland of a secondary containment at all times.

Section II.B. – "a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, within any designated coldwater fishery, and within any waterbody identified as habitat for federally-listed threatened or endangered species."

> Comment: This section should be revised to read "a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, within any designated coldwater fishery, and within any waterbody identified as habitat for federally **or state**-listed threatened or endangered species."

Section II. – A provision should be added in this section addressing the following comment.

> Comment: In this section the Plan and Procedures should require a review process for potential cumulative impacts of stream crossing construction activity. This review should not only examine the streams impacted by the current project, but also evaluate the impact of other stream crossing construction activities that recently took place on those same waterbodies. Construction of multiple crossings on a stream or river has the potential for cumulative effects on that water system, even in instances where a single crossing may not. Recurrent stresses on fish, such as those that originate from elevated suspended sediment concentrations, may have cumulative effects on fish health, survival and reproduction. The capacity of the system to recover from an impact may be exceeded, and the detrimental effects of crossing construction may become permanent. (*See* DRN Scoping Comment, Exhibit 7, Lucie Levesque et al., Review of the Effects of In-Stream Pipeline Crossing (2007))
>
> For a more comprehensive analysis of the different development scenarios for pipeline construction in the Marcellus Shale Region, and the resulting cumulative impacts of that construction activity, the Commission should review a report provided by the Nature Conservancy titled, "Natural Gas Pipelines: An Excerpt From Report 2 of the Pennsylvania Impacts Assessment." (*See* DRN Scoping Comments, Exhibit 8).

Section III.A. – "The number and experience of Environmental Inspectors assigned to each construction spread should be appropriate for the length of the construction spread and the number/significance of resources affected."

> Comment: The Procedures should require a more specified level of training, experience, or credentials for their inspectors. This would reduce the likelihood of improper or inconsistent application of the regulations. The word "appropriate" in the current draft does not provide adequate guidance for the requisite experience level of an inspector. There should be objective standards (i.e. specific licenses, years of experience, education

level, environmental training programs, local knowledge, etc.) outlined in the Procedures as a baseline for inspector approval.

There were numerous potentially improper and inconsistent categorizations of pollution events by inspectors during the recent construction of two large scale pipeline projects (the Tennessee Gas and Pipeline Company's 300 Line Upgrade Project and the Columbia 1278k Replacement Project). These inconsistent categorizations and results are a direct consequence of poorly designed standards for evaluating the credentials and experience of inspectors.

Section III. – A provision should be added in this section addressing the following comment.

Comment: Inspectors should be free of all contractual issues or limitations that may impede or prevent them from properly issuing fines or stop-work orders. This freedom from conflicts of interest should be outlined in the Procedures, as there currently is no such provision.

Section III. – A provision should be added in this section addressing the following comment.

Comment: A clear delineation between the responsibilities of Army Corps inspectors and the FERC's inspectors should be articulated in the Procedures. Such guidelines in the Plan and Procedures would better indicate who is directly responsible for corrective actions, how quickly they should occur, and who is ultimately responsible if they do not occur, and or, are delayed.

Section IV.A.2. – A provision should be added in this section addressing the following comment.

Comment: This section must provide a clear minimum time period in which a project sponsor must respond to a spill or discharge. Furthermore, this section should also outline the time period in which the clean-up activities must be completed, and the standards by which environmental inspectors will determine whether or not the clean-up activities were successful. While such baseline measures may be superseded by more protective measures at the state or local level, they should still be in place in case such measures are absent.

Section V.B.3. – A provision should be added in this section addressing the following comment.

Comment: The Procedures should include specific requirements and procedures that ensure operators properly identify all streams, springs, or other water bodies so that proper setbacks can be observed. Some regional and state departments of environmental protection, such as PADEP in Pennsylvania, rely on 7-1/2 minute USGS quads to define the locations of streams, springs, or other bodies of water; however, many surface waters do not appear as blue lines on 7-1/2 minute USGS quads because they are not scientific representations of surface waters or even perennial or intermittent streams. (*See* DRN Scoping Comments, Exhibit 5, Michelle Adams, Evaluation of Erosion and Sediment Control and Stormwater Management for Gas Exploration and Extraction Facilities in Pennsylvania under Existing Pennsylvania Regulations and Policies to Determine if

Existing Safeguards Protect Water Quality in Special Protection Waters of the Delaware Basin for the Delaware River Basin Commission (DRBC)).

Section V.B.3.c. – "Where pipelines parallel a waterbody, attempt to maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way."

Comment: 15 feet of undisturbed vegetation between a waterbody and a parallel construction right of way is inadequate. At a minimum, construction should be kept out of the floodplain, particularly in a FEMA studied area or at a minimum 50-feet from the top of any defined bank.

Section V.B.3.g. – "Crossing of waterbodies when they are dry or frozen to the bottom may proceed using standard upland techniques and the staff's Plan, provided that Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1."

Comment: This section should address restoration of crossing areas to a pre-construction condition, include photo documentation before and after construction as well as soil compaction and bulk density testing to ensure hydrologic connectivity is not severed from upland sources (i.e., springs).

Section V.B.3 – 9. – A provision should be added in this section addressing the following comment.

Comment: FERC should include standards for tree preservation in the locating and construction of stream crossings. Priority should be given to identifying crossing locations that do not remove streamside canopy from the banks and riparian corridors.

Furthermore, there should be a requirement for streambank vegetation that can be protective of water quality and provide for streamside and aquatic habitat – such as the use of native shrubs or meadow ecosystems that can be beneficial ecologically and also consistent with the existence of the pipeline.

Additionally, allowing open cut crossings of minor and intermediate waterbodies and not major waterbodies is logically inconsistent. The cumulative impacts of multiple crossings of minor and headwater streams is potentially more threatening to watershed health than a single crossing of a large waterbody. As noted, open cut crossings should be prohibited regardless of waterbody size.

Section.V.B.4. – "All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2."

Comment: All spoil piles should be placed outside the floodplain or, at a minimum, 50-feet from the top of any defined bank.

Section V.B.5.c. – "Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place."

> Comment: The use of the term "highest flow expected to occur" is not sufficiently specific enough to ensure adequate environmental protection. A higher standard should be identified. For example, the Procedures should require that the bridge be able to withstand the 100 year flood levels – a standard applied in many other construction zones proximate to waterbodies.

Section V.B.5.e. – "Remove equipment bridges as soon as practicable after permanent seeding. Obtain any necessary approval from unless the COE, or its delegated appropriate state agency, authorizes it as for permanent bridges."

> Comment: The Procedures should define a specific time period within which the project sponsor must remove the bridge. Use of the term "practicable" is not sufficiently specific enough to be adequately protective. Unless a specific schedule is established in the Procedures project sponsors will have the opportunity to leave bridges in place well beyond their intended use.

Section V.B.6.b. – A provision should be added in this section addressing the following comment.

> Comment: The Procedures should articulate more stringent requirements for filtration systems used in "dry cut" crossing construction Plan. The only way in which "dry cut" methods can be successful is if there is a specific plan implemented for handling "dirty water" in the trench during excavation. The Pike County Conservation District has identified instances where filtration systems that were installed for this kind of construction failed resulting in high turbidity and discharges into the waterway. (*See* DRN Scoping Comments, Exhibit 2, Beecher, Letter, Dated December 20 2011).

Section V.B.6.c. – A provision should be added in this section addressing the following comment.

> Comment: The Procedures should require the installation of secondary containment structures in all applicable areas during and after construction to ensure proper environmental protection.

Section V.B.6.d. – A provision should be added in this section addressing the following comment.

> Comment: The Procedures should require that a specific contingency plan for the high-risk operation of Horizontal Directional Drilling be in place at the time the FERC Certificate is issued. (*See* Exhibit 2, Beecher, Letter, Dated December 20 2011).

Section V.B.6.d. – A provision should be added in this section addressing the following comment.

Comment: The Procedures should require that project sponsors disclose the chemical composition of their drilling muds by the time the FERC Certificate is issued. The provision should also include incentives for project sponsors to use non-toxic drilling muds. In July and August 2011 three separate spills muddied a high value stream in Susquehanna County, where at least 1,400 gallons of drilling mud spilled into the waterway. Kevin Marion, director of pipeline engineering at Laser, stated that Susquehanna County geology has led to inadvertent returns "more often than any other place I've ever worked." And Furthermore, that "[t]here's really hardly anything we can do to design this or build it differently." The requisite disclosure of the drilling muds would help facilitate appropriate responses to such accidents. (*See* Exhibit 11, Laura Legere, *Third Spill at Pipeline Sullies Susquehanna County Creek*, (2011)).

Section V.B.7. – "Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:"

Comment: The open-cut construction method should be prohibited on all waterbodies. Smaller tributary streams provide critical habitat and preserving their quality and health has a direct affect on the quality of downstream flows. There is no reason for the open-cut method to be used on any size waterbody. And there is certainly no justification for a provision that allows the use of open-cut (or "wet cut") construction methods on waterbodies that have received any level of special designation at the regional, state or federal level.

Despite being the cheapest crossing method, this construction technique results in significant and unnecessary environmental impacts. The open cut method involves laying utility cable or pipe across a stream by digging a ditch from one side of the stream to the other. A backhoe is used to dig a ditch across the stream while the stream is flowing, and the ditch is not covered during construction. Wet open trench construction occurs without any isolation or diversion of flow away from the work area, and typically results in the significant elevation of downstream sediment loads during and shortly after the period of construction. During this construction method, levels of suspended sediment increase rapidly at the onset of instream activity and are followed by peaks of even higher suspended sediment concentrations during activities such as blasting, trench excavation, and backfilling. Alternate stream crossing techniques, such as directional boring and isolation (dry) methods such as dam–and-pump or flume, produce substantially lower amounts of sediment than wet open trench construction. (*See* DRN Scoping Comments, Exhibit 4, Utility Stream Crossing Policy, ETOWA Aquatic Habitat Conservation Plan (2006)). For a more thorough analysis of the detrimental effects of "wet cut" construction methods please refer to Lucie Levesque's article titled, "Review of the effects of in-stream pipeline crossing." (*See* DRN Scoping Comments, Exhibit 7).

Section V.B.10.a. – "install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;"

Comment: Sediment barriers removed during the construction day for construction activities should be immediately replaced when the construction activity requiring their removal has stopped.

Section V.B.10.b. – "where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way; and minimize the potential for sediment flow into the waterbody; and"

Comment: Sediment barriers should be placed a minimum of 50-feet from the top of any defined bank of any waterbody.

Section V.B.11. – "Remove the dewatering structures as soon as practicable after the completion of dewatering activities."

Comment: The Procedures should define a specific time period within which the project sponsor must remove the dewatering structure. Use of the term "practicable" is not sufficiently specific enough to be adequately protective. Unless a specific schedule is established in the Procedures project sponsors will have the opportunity to leave dewatering structures in place well beyond their intended use.

Additionally, dewatering activities should require the use of a device (i.e., pump water filter bag) placed on a stabilized surface at least 50-feet from the top of any defined bank of any waterbody.

Section V.C.1. – 9. – A provision should be added in this section addressing the following comment.

Comment: See comment for Section VII.A.2. & 4 of the Plan.

Section V.C. – A provision should be added in this section addressing the following comment.

Comment: The section of the Procedures addressing Restoration is completely devoid of any time requirements for the successful completion of restoration activities. This glaring omission must be remedied by requiring a proposed completion time schedule for restoration actions. In a recent large scale pipeline construction project (Tennessee Gas and Pipeline Company's 300 Line Upgrade Project), the project sponsor was accruing Notices of Violation from local soil conservation districts for failures to restore the Right of Way over seven months after the pipeline had been put in service, and over a year after the construction had been complete. Unless the Commission identifies a reasonable time schedule for restoration activities, project sponsors will continue such activity.

Section V.D.2. – "Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency."

Comment: There are herbicides and pesticides that are specifically labeled for application in close proximity to waterbodies. It is recommended that FERC require all pesticide and herbicide applications on ROW projects (both upland and lowlands) to strictly follow label directions and only be applied by a state-certified pesticide applicator. And the use

of herbicides along waterways or on any portion of the project must be specifically limited to those circumstances for which there is a vegetation restoration and maintenance plan that has been written by an expert in the field of horticulture or landscaping with a level of training specifically articulated, and that the level of herbicide use be strictly limited to only the minimum necessary for invasives control and native plant restoration.

Herbicides and pesticides may be applied 100-feet from any surface water when an appropriate buffer is provided; however, a 200-foot buffer should be maintained around a well head to minimize leaching potential.

Additionally, records of application date, chemical type and application rate should be required to be included in annual reports submitted to regulatory agencies.

Section V. – A provision should be added in this section addressing the following comment.

Comment: Nowhere in the Commission's Procedures is there any discussion about the Direct Pipe Method. This method should be encouraged by the Commission as it is more environmentally protective than the open-cut or dry-ditch methods, and enjoys numerous technical and cost advantages over the HDD method, including but not limited to: better drill hole support to prevent collapsing, cutting wheel and cutting tools of the micro-tunneling machine can be adapted to any geological conditions, minimal space required, minimum slurry volume required, high performance rates, and significantly less expensive than the HDD method (*See* Exhibit 1, Marc Peters, et al., *Direct Pipe: Latest Innovation In Pipeline Construction – Technology and References*, Pipeline Technology Conference (2008), pg 4.). The Direct Pipe Method has already been used in numerous instances in the U.S. and abroad, and should be discussed in the Procedures.

Section VI.A.1. – **"**The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction."

Comment: See comment from Section V.B.3. of the Plan. Additionally, in order to properly identify waterbodies and wetlands, independent surveys should be required to verify the often specious accuracy of the USGS quads.

Section VI.A.3. – "Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength."

Comment: The Commission should more specifically identify what "early in planning process" means in order to provide project sponsors with adequate guidance. Additionally, the use of the word "encouraged" is not an effective way to ensure that project sponsors are abiding by this provision. The Commission should use stronger language such as "shall" wherever possible.

Additionally. the definition of "excessively wide" should be clearly defined and a justification should be required for why they might occur. A pollution prevention plan should be outlined for practices to implement in those areas.

Section VI.A.4. – "Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete."

Comment: Wetland boundaries and buffers should remain clearly marked until restoration activities have been completed. Restored areas should be marked with permanent conservation easements and maintained/monitored for at least three years following completion of restoration activities.

Section VI.B.1.b. – "The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of actively cultivated or rotated cropland or other disturbed land."

Comment: Submissions for approval of extra work areas and access roads should include construction plans AND justification for evaluation by the Director.

(Former Section VI.B.1.c.) – "Limit clearing of vegetation between extra work areas and the edge of the wetland to the certificated construction right-of-way."

Comment: Clearing of vegetation between extra work areas and the edge of wetlands should be limited to the certificated construction right-of-way. This provision should remain.

Section VI.B.1.c. – A provision should be added in this section addressing the following comment.

Comment: When the construction right-of-way includes wetland areas with soil firm enough to use for access, precautions should be taken to prevent compaction from heavy traffic. Additionally, restoration should be clearly defined and carefully performed in these areas following construction.

Section VI. B.1. – A provision should be added in this section addressing the following comment.

Comment: The Procedures should include a provision stating that all access roads constructed with crushed rock for a pipeline projects require a complete and separate erosion and sediment control plan. The construction of Gas Exploration and Extraction facilities and associated construction and/or improvement of roads can negatively impact water quality, and these facilities have the same potential as other construction activities to degrade water quality. (*See* DRN Scoping Comment, Exhibit 5, Michelle Adams, Evaluation of Erosion and Sediment Control and Stormwater Management for Gas Exploration and Extraction Facilities in Pennsylvania under Existing Pennsylvania Regulations and Policies to Determine if Existing Safeguards Protect Water Quality in

Special Protection Waters of the Delaware Basin for the Delaware River Basin Commission (DRBC)).

Some states, such as Pennsylvania, do not apply the same standards of performance, or regulatory oversight, to oil and gas exploration and extraction facilities as is applied to other construction activities. Therefore, it is necessary for uniform federal oversight over these activities to minimize erosion and sedimentation harms. In Pennsylvania, roads constructed of crushed rock are considered to be a "best management practice" adequate for protection of special protection waters. In virtually all other construction projects the construction of roads – including crushed rock roads – is considered earth disturbance that requires its own erosion and sediment control measures.

Section VI.B.2.b. – "Minimize the length of time that topsoil is segregated and the trench is open (i.e., trench the wetland immediately prior to lowering in the pipeline)."

Comment: The Procedures should define a specific time period of how long the trench is open and the topsoil is segregated. Use of the term "minimize" is not sufficiently specific enough to be adequately protective. Unless a specific schedule is established in the Procedures project sponsors will have the opportunity to leave the trench open beyond what is necessary. The length of trench that should remain open should be limited to that which can be excavation and backfilled within one work day.

Section VI.B.2.f. – "The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining debris, including ash, is removed for disposal."

Comment: Burning of woody debris should not be performed within a wetland.

(Former Section VI.B.2.k.) – "Do not cut trees outside of the approved construction work area to obtain timber for riprap or equipment mats."

Comment: Tree cutting should not be done outside the approved construction work area.

Section VI.B.3. – A provision should be added in this section addressing the following comment.

Comment: Sediment barriers should be installed prior to ANY disturbance activity.

Section VI.B.3.b. – "Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and minimize the potential for sediment flow into the wetland."

Comment: Sediment barriers should be designed and installed in a manner sufficient to prevent sediment flow into wetland areas, not just minimize the potential for sediment-laden runoff.

Section VI.B.4. – "Remove the dewatering structures as soon as practicable after the completion of dewatering activities."

Comment: The Procedures should define a specific time period within which the project sponsor must remove the dewatering structure. Use of the term "practicable" is not sufficiently specific enough to be adequately protective. Unless a specific schedule is established in the Procedures project sponsors will have the opportunity to leave dewatering structures in place well beyond their intended use.

Additionally, trench dewatering should be performed on stabilized areas and within the construction right-of-way, if at all feasible. At a minimum, trench dewatering should be performed. Dewatering activities should require the use of a device (i.e., pump water filter bag) placed on a stabilized surface at least 50-feet from the top of any defined bank of any waterbody.

Section VI.B.1. – 3. – A provision should be added in this section addressing the following comment.

Comment: Extra work areas and staging sites should be located outside of existing forested plant communities. Tree loss and canopy reduction adjacent to wetland systems should be avoided. Additionally, priority should be given to avoiding disturbance of palustine (forested) wetlands. These systems take decades to develop and the temporal scale of restoration makes it problematic.

Section VI.C.5. – "Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present)."

Comment: The project-specific wetland restoration plan should be developed prior to construction in the wetland to allow for immediate remediation.

Section VI.C.6. – "Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species."

Comment: This section should read "Ensure that all disturbed areas successfully revegetate with wetland **native/non-invasive** herbaceous and/or woody plant species." Additionally, the term "successfully" needs to be more specifically defined in this section. Perhaps this could be accomplished by referencing Section VI.D.4. of the Procedures.

Section VI.C.1. – 7. – Provisions should be added in this section addressing the following comment.

Comment: The Commission must require that further details and guidelines be developed and supplied regarding the "Project-specific Wetland Restoration Plan." This umbrella term does not supply enough information. Additionally, it is unacceptable that this is the only section in either the Plan or Procedures that invasive species suppression is addressed. Invasive species are a major economic and ecological issue in uplands,

lowlands, and wetlands systems. Yet, the Commission only tangentially mentions it as a component of a poorly defined "Wetland Restoration Plan."

Section VI. D.4.a. – d. – Provisions should be added in this section addressing the following comment.

Comment: The Commission must require a more quantifiable procedure for validating the vegetative cover. This would involve either vegetative plots or transects through both the reference plant community and the disturbed wetland.

Given that trees within 15 feet of the pipeline may not be allowed to grow (an effectively 30 foot ROW) the remaining disturbed area should be required to achieve at least 90 percent of the species, cover and structural diversity of the reference system.

A firm metric needs to be established regarding the level of exotic (invasive) species allowed in the system. As written, FERC would potentially allow a dominance of invasive species if adjacent areas have them present. Disturbance drives biological invasion – it promotes it. As such, additional efforts need to be made to keep invasive organisms out of the ROW for the entire service life of the ROW. Achieving over 95 % native plant cover is a common and obtainable metric for restoration areas.

It is critical to differentiate between "vegetation cover" and restoration. Restoration involves the creation of native plant communities structurally and functionally equivalent to the systems displaced. It does not just involve getting native plants to grow on the site.

Respectfully Submitted,

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Exhibit B