

Kirk Bowers, retired, Licensed Professional Engineer since 1989. I worked in land development for over 30 years. I administered the Erosion control program for Greene County and was a Licensed Combined Administrator for the erosion control program for 14 years. I have designed and reviewed hundreds of construction plans in my 30 year career.

In Virginia, gas pipelines are required to have approved Annual Standards & Specifications that are consistent with the requirements of the Virginia Stormwater Management Act and associated regulations, the Erosion and Sediment Control Law and associated regulations and the regulations governing the General Virginia Stormwater Management Program Permit for Discharges of Stormwater from Construction Activities. Virginia Code states that natural gas pipeline companies shall annually submit a single set of standards and specifications for approval that describes **how** land-disturbing activities shall be conducted.

The Annual Standards are copied from the DEQ erosion control handbook. They do not show the details for construction in the field that are shown in an engineered construction plan designed by a Professional Engineer. The Annual Standards program was not designed for large diameter pipeline projects. The Annual Standards program is not the appropriate regulatory program for the ACP. The concept set out by state law in the creation of the AS&S program is that entities which are required to submit annual standards and specifications essentially become **self-regulating**. Virginia law places an authority that would normally be delegated to a locality for the review, approval and enforcement of erosion control and stormwater management plans with the utility company with limited oversight by DEQ.

However, DEQ has required ACP to submit project specific ESC and SWM plans for review and approval. In responses to comments, DEQ acknowledged that review and approval of project-specific stormwater management and erosion and sediment control plans is a critical component of assuring protection of water quality. But, DEQ claims that the plan review is separate and apart from the scope of this proposed 401 Certification. This is the crux of this discussion. How can the plan review be separate from the 401 Certification? Before any land disturbing activity can occur, DEQ must have reviewed and approved ACP's project-specific plans.

This is not considered a unified approach. Unlike many of the Board's permit programs, Virginia law does not provide a right for public notice of and comment on the ESC and SWM plans. DEQ did request **input** on technical and engineering requirements of the draft ESC and SWM plans. But the public is not involved officially in the plan review process. The process is not transparent. The plans normally follow an iterative process

of review followed by re-submission of plans until the plans are approved or denied. The public has not seen review comments for the ACP, nor revised plans for the ACP. For a project of this size, normal time for plan review and approval would be a minimum of a year. The plans were submitted to DEQ in July which does not give adequate time for plan review. The review process is incomplete and it is inappropriate to make a decision on the 401 Certificate.

To qualify for coverage under Nationwide Permit 12 (NWP 12), the pipeline developers must comply with numerous General Conditions applicable to each nationwide permit including General Condition 12. This condition requires that appropriate soil erosion and sediment controls be used during the construction. General Condition 12 ties in the requirements and practices of the VESC program and regulations. The Nationwide 12 is another permit that is connected to the erosion control program and plan review.

In the **Summary Response to Comments:**

**5. DEQ is inappropriately excluding comments on Erosion and Sediment Control Plans and Stormwater Management Plans, the Corps' NWP 12 and environmental impact statements from the record of the proposed 401 Certification.**

Staff Response: Before any land disturbing activity can occur, DEQ must have reviewed and approved ACP's project-specific plans. State law further mandates that natural gas pipeline utilities meet the requirements for VESC and SWM under a DEQ approved Program.

My response:

Because plan review is required and the plans are essential to preserving and protecting water quality, it would be logical and follow reason that the 401 Certificate cannot be approved until it is certain that the construction plans meet the requirements of the Virginia Stormwater Management Program. How can the 401 Certificate be approved when there is so much uncertainty about meeting water quality standards?

You, the Board, would be assuming that the erosion control plans will provide adequate erosion control during and after construction. But this is not the case because the erosion control measures were not designed to be used on steep slopes. For removal of suspended solids, the value of 40% to 50% efficiency appears reasonable. The lower efficiency ratings for steep slopes significantly reduces the ability of filter socks or silt fences to control erosion from flowing into streams at bottom of the steep slopes.

The mountains with slopes in excess of 50% and water crossings present the greatest challenges. Steep slopes make it difficult to operate construction equipment and construction accidents and spills occur frequently. Clearing and grading operations on steep slopes are difficult. Denuded areas will be very prone to erosion on steep slopes. Severe weather will have significant impacts on disturbed areas resulting in increased sediment loads into adjacent streams at bottom of steep slopes.

State law mandates that natural gas pipelines meet the requirements for VESC and SWM. But due to the low removal efficiency of erosion control measures on steep slopes, the minimum engineering criteria for sediment removal cannot be met. The erosion control measures don't function as required under these site conditions. The assumption that the construction plans will meet minimum requirements is not valid.

**7. Reasonable Assurance - The 401 certification fails to demonstrate “Reasonable Assurance”. DEQ has failed to properly evaluate potential impacts to water quality including identification of which water quality standards might be affected.**

Staff response: In making a finding that there is reasonable assurance a state may rely on tools that reduce the *uncertainty* inherent in the predictive nature of a 401 certification, including: future submissions of revised plans, reports, and studies. The need for future submissions of revised plans, reports, and studies does not preclude a state from finding reasonable assurance.

My response: The uncertainty created by construction of the ACP concerning erosion control impacts is too great to justify a decision by the Board for approval of the 401 Certificate. How can a permit Authority issue a water quality certificate when the minimum requirements cannot be met and plan reviews are not complete? It is logical that a Board or permitting authority has the choice to make a decision based on sound engineering and proven science. Future submissions are required to verify that the erosion control protections function as required. A correct decision cannot be made until all materials are reviewed and it is verified that the devices function as required.

Soil loss modeling for a section of the Pipeline three years after construction resulted in average soil losses of more than two tons per acre. During construction, soil losses on steep slope sections were significantly higher, even with erosion control measures in place.

**Staff response:** ACP is required to have approved VESC and SWM plans that meet regulatory requirements to protect water quality.

My response: The Board cannot issue its certification until ACP affirmatively demonstrates that its proposed pollution control measures will adequately control sedimentation and prevent turbidity levels that violate Virginia's water quality standards. Such a demonstration requires quantification of sediment loading, extent, and persistence for each waterbody affected by the Atlantic Coast Pipeline.

I speak on behalf of the Sierra Club, Virginia Chapter and our 20,000 members.