



west virginia department of environmental protection

Division of Waster and Water Management
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Austin Caperton, Cabinet Secretary
dep.wv.gov

January 17, 2019

Re: WV Permit No. WV0116815
Registration Application No. WVR311199
EQM Gathering OPCO, LLC
EQT Hammerhead D001
Responsiveness Summary

Dear Commenter,

The State of West Virginia, Department of Environmental Protection (DEP), Division of Water and Waste Management (DWWM) issued a State General Water Pollution Control Permit to regulate the discharge of stormwater runoff associated with oil and gas related construction activities. This General Permit authorizes discharges composed entirely of stormwater associated with oil and gas field activities or operations associated with exploration, production, processing or treatment operations or transmission facilities, disturbing one acre or greater of land area, to the waters of the State. WV0116815 (Stormwater Associated with Oil and Gas related activities) was issued on May 13, 2013. It became effective on June 12, 2013 and expiration has been extended until July 1, 2019.

EQM GATHERING OPCO, LLC, (EQM) proposes to construct and operate the Hammerhead D001 Pipeline Project consisting of approximately 25 miles (503 acres) of 30-inch diameter natural gas transmission pipeline in Clay, Battelle, Mannington, Church, and Grant Districts in Monongalia, Marion, and Wetzel Counties, West Virginia (WV). The project includes approximately 19 miles of associated access roads and utilization of additional temporary work space as necessary throughout the project area. The purpose of the proposed project is to transport natural gas from EQT's PA development fields to a sales point in Wetzel County, West Virginia (WV).

DWWM published a Class I legal advertisement (public notice) in the The Dominion Post. This public notice allowed the DWWM to receive public comments on the proposed project. The public notice/public comment period closed on December 13, 2018.

There was a public hearing held for this Oil & Gas Construction Stormwater General Permit Registration (WVR311199) at City Council Chambers in the Morgantown City Hall on Monday December 3, 2018

The DWWM would like to take this opportunity to thank those who submitted written comments on this application. The DWWM has made every attempt possible to ensure that all questions/concerns related to the application were addressed. The attached Responsiveness Summary highlights the issues and concerns that were identified through written and oral comments received during the comment period.

The Responsiveness Summary is organized such that comments frequently mentioned, or general in nature, or outside the scope of DEP's authority, are responded to in Section A (General Comments Responses). More specific comments on the Construction Stormwater Permit Registration, and our response, are found in Section B (Construction Stormwater Permit Registration - Specific Comments and Responses). Oral comments received at the Public Hearings are summarized in Section C (Public Comments and Responses).

This permit registration will be issued on January 17, 2019. Notice is hereby given of your right to appeal the terms and conditions of this permit registration of which you are aggrieved to the Environmental Quality Board by filing a NOTICE of APPEAL on the form prescribed by such Board, in accordance with the provisions of Section 21, Article 11, Chapter 22 of the Code of West Virginia within thirty (30) days after issuance of this permit registration.

Thank you for your interest and comments on the EQM Gathering OPCO, LLC, application. If you have any further questions or concerns, please do not hesitate to contact Rick Adams of my staff at 304-926-0499 ext. 1354 or by email at Rick.d.adams@wv.gov.

Sincerely

Harold D. Ward

Harold D. Ward
Acting Director

Section A: General Comments Responses.

In many cases multiple comments were provided on specific sections or issues, and those responses have been categorized to the extent possible below:

- A. **Water Quality Monitoring:** Water Quality Monitoring is not required by the General WV Water Pollution Control Permit No. WV0116815.
- B. **Waterbody Crossings:** The stream and wetland crossing details provided in the Hammerhead D001 Pipeline Project permit application shows several different crossing methods – including cofferdam, flume pipe, pump around, conventional bore and temporary with placement of wooden mats. Table 1. Aquatic Resource Crossings lists the crossing type, crossing method, stream name, location Resource Classification, Temporarily Affected Aquatic Resource Area and Permanently Affected Aquatic Resource Area.

Protection of waterbodies includes recognition, demarcation, and consistent compliance with established procedures for streams and wetland crossings. The main objective for a pipeline crossing is to construct the pipeline in an expeditious manner while minimizing the amount of instream activities. During temporary highwater levels, construction attempts across a stream will be suspended until return of favorable conditions. Once the waterbody crossing begins, it will continue until it is completed.

The main goal for a vehicular crossing over or through a waterbody is to construct a safe and effective structure sufficient with consideration to several variables including the size of equipment utilizing the crossing, the length of crossing, the duration for access and the potential of inclement seasonal weather. Although all crossings shall be deployed to protect the waterbody, the threat from seasonal rains, freeze/thaw, snow, and other variables may require additional maintenance or supports. During temporary highwater levels, construction attempts cross a stream will be suspended until return of favorable conditions.

- C. **Enhanced best management practices (BMPs):** Must be used for projects discharging to any waters other than Tier 1 or where BMPs are found to be inadequate to protect water quality. Enhanced BMPs are provided for this project since this project is discharging to state waters with an approved Total Maximum Daily Load (TMDL). Enhanced BMPs include all the following:
 - Inspection of all erosion and sedimentation controls in TMDL watersheds within disturbed areas will be, at a minimum, performed once every seven calendar days and within 24 hours after any storm event greater than 0.25 inches per 24 hours period. Repairs or maintenance shall be performed immediately to BMPs. Locate a rain gauge on site to monitor and record daily rainfall events;

- Repairs or maintenance shall be performed immediately to BMP's;
 - Temporary seeding and mulching within 4 days when areas will not be disturbed for more than 14 days; Permanent seeding and mulching within 4 days of reaching final grade.
 - Permanent stabilization within 7 days after construction has been complete.
- D. **Additional BMPs:** The following additional BMPs are provided at all right-of-way diversions (water bars) and roads:
- Right-of-Way diversion (Water bars) are proposed with sumps and reinforced filtration devices;
 - Access roads with ditches, rock checks and culverts with sumps.
- E. **Stream Restoration:** Upon the installation of the proposed crossing, the streambanks and streambeds shall be stabilized in the following manner.
- Stream banks will be restored to original contours and graded to match undisturbed bank characteristics upstream and downstream from the crossing location.
 - Streambanks shall be stabilized with an erosion control blanket or equivalent BMP and revegetated with a permanent seed mixture.
 - Any riparian vegetation shall remain intact to the greatest extent possible.
 - The streambeds shall be backfilled with the original substrate material.
 - Any diversions or flume pipes shall be removed from the streambeds.
 - All fabric, rock, silt sock, and associated construction materials shall be removed from the site upon termination of the project.
 - Any remaining disturbed areas shall be stabilized and seeded with a permanent seed mixture.

Section B: Construction Stormwater Permit Registration – Specific Comments and Responses

Comment #1: Drinking Water Impacts:

(a) The project impacts the drinking water source for Pine Grove Water and Sistersville Municipal Water. DEP must require enhanced controls through the source water protection areas and when crossing source water protection areas for these utilities. DEP must require notification to downstream utilities in the event of a spill, bypass or upset in sufficient time to allow the utility to take precautionary measures.

(b) DEP must also require that the applicant agree to provide all needed replacement water in the event that spills, upsets, bypass or other discharge from construction or operation of the pipeline disrupt utility water supplies.

Response 1a: Pine Grove Water is located on North Fork of Fishing Creek approximately 6.9 miles downstream of the proposed crossing. Sistersville Municipal water is located on the Ohio River approximately 47.3 miles downstream of the proposed crossing and approximately 11.3 miles downstream of the confluence North Fork of Fishing Creek and the Ohio River. Enhanced BMPs will be incorporated throughout the entire project area. See Section A:C: Enhanced best management practices (BMPs)

Any unauthorized discharging, leaking, releasing, pumping, pouring, emitting, emptying, injecting, leaching, escaping, dumping or disposing of any material into the natural environment – on the ground, surface waters, ground waters, etc. is prohibited. This includes but is not limited to, any spill of oil, lubricant, grease, sediment to water, chemicals, gases, condensate, hazardous substances and hazardous wastes. All spills will be promptly reported to the Environmental Coordinator for further analysis and reported to the appropriate regulatory agency when required. EQM will notify downstream utilities in the event of a spill, bypass, or upset that has potential to contaminate North Fork of Fishing Creek.

In addition, the permittee shall report any noncompliance which may endanger health or the environment immediately after becoming aware of the circumstances by using the Department's designated spill alert telephone number ((800) 642-3074). A written submission shall be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time, and if, the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

Response 1b: A statement has been added in the SWPPP that EQM agrees to provide replacement water in the event that spills, upsets, bypass, or other discharges from the project disrupt utility water supplies if confirmatory samples and investigation indicate that the disruption was caused as a result of EQM pipeline construction.

Comment 2: Fracked gas and fossil fuels: are antiquated and dangerous to our citizenry, both in removing them from the earth and in transporting them. If you believe in our future, and if you as scientists believe the two recent reports on climate disruption, you will not imperil the people of the earth and more immediately those of northcentral WV. This pipeline threatens drinking water, can explode, can damage soils, wetlands and streams, which imperil natural life and aqua-tourism (e.g. fishing). Support tourism and sustainable economies such as hemp production and renewable forms of energy.

Response 2: DWWM, via this general stormwater permit, or other authorities, is not empowered to evaluate fracking, fossil fuels, tourism or other sustainable economy benefits or negative impacts relative to the betterment West Virginia.

See Section A: General Comments Responses.

Comment 3: Stream Crossings:

(a) Detailed construction plans for individual stream crossing are needed including stream restoration plans. The Sediment and Erosion Control Plans (SECP) show standard construction details; however, no two stream crossings will be the same. There are different slopes and topography features at each stream crossing. Individual crossing plans must be submitted for each impacted stream. The one-size-fits-all approach does not work, as we have seen on previous pipeline construction projects.

(b) Additionally, WV Water Quality Standards include criteria for turbidity. The Hammerhead Company and **ALL its contractors and subcontractors** should be required to conduct frequent monitoring for turbidity at **all** stream crossings to show compliance with the state standards.

(c) Stream restoration plans must be included in the permit application. Restoration plans must include natural stream channel design. Chronic erosion issues can occur if the stream bed and bank are not properly restored following the completion of construction.

Response 3a: See Section A: Response B

Response 3b: See Section A: Response A

Response 3c: See Section A: Response E

Comment 4: Steep Slopes: Forty percent of the project's construction occurs on slopes greater than 35%. The applicant's proposed controls on steep slopes are insufficient. The applicant must define the additional erosion control measures for steep slopes including a landslide mitigation plan. WVDEP's Erosion and Sediment Control Manual states that it is difficult to install Right-Of-Way diversions on slopes greater than 35%. The applicant must reroute the pipeline to avoid slopes greater than 35 % where highly erodible soils occur (highly erodible soils are defined by USDA-NRCS). WV-DEP must require additional geological studies showing the orientation of the bedrock and the topographic slope where the project encounters steep slopes. The project's SWPPP is very vague concerning Slip Mitigation and Remediation. For example, in Section 8.9.1, the plan states that additional stabilization controls will be used for extreme scenarios. These additional stabilization controls must be defined. Section 8.9.2 states that should a slip occur, additional engineering review and design will be employed. A slip is highly likely to occur WV-DEP if allows so much of the construction to occur on steep slopes. More specific and detailed information on preventing and addressing slips must be included.

Response 4: Portions of the Hammerhead D001 Pipeline Project will be constructed in steep, mountainous terrain. Slope instability in the form of landslides, landslips, or surficial slumping can present a significant hazard to pipeline routing, design, construction, and operation in steep slope areas if proper planning and mitigation is not considered in advance.

A "Slide Mitigation Report" has been added to Appendix I of the SWPPP. This report addresses potential post-construction landslide hazards for the pipeline listed below. The route of this line was analyzed to determine if mitigation controls placed during construction are necessary to avoid potential landslide issues following construction. Potential landslide sites were identified by a desktop analysis that considered previous landslide activity, slope steepness, and sidehill construction. EQT Design Engineering has determined that some or most of the locations along the pipeline require some form of additional surface or subsurface drainage control to mitigate potential slides. A summary of the required mitigation controls can be found in *Section 4.0*. A plan view showing the locations and extents of the controls for each site can be found in *Appendix A*, and details for the controls are provided in *Appendix B*.

When routing the project on steep slopes, EQM must follow construction guidelines in accordance with the Slide mitigation report and Chapter 8 of WVDEP's Erosion and Sediment Control Best Management Practice Manual, which includes considerations for slip prevention associated with pipeline construction during routing as well as engineering design, preconstruction planning, construction, and post construction.

Comment 5: The applicant's treatment at slope breaker terminus is insufficient. Their SWPPP calls for one 18-inch filter sock at the outlet of water bars. This level of treatment has been cited by DEP inspectors for failing on numerous occasions and a reason that sediment-laden water entered streams. We recommend that sumps with stacked filter socks or silt fences as outlet protections be required to control erosion. One 18-inch filter sock is often overtopped by sediment-laden water if the sump is not big enough. It appears in DEP's comments on the application that additional controls have been requested. If this is the case, their SWPPP needs to be updated to reflect the enhanced BMPs required by DEP at water bar outlets.

Response 5: See Section A: Response C and Response D. The SWPPP proposes enhanced BMPs and additional BMPs.

Comment 6: Sediment traps should be required on slopes exceeding 15 %. A disproportionate number of the water quality violations associated with pipeline construction originate on steep slopes. With a requirement of sediment traps at the base of steep slopes, these water quality violations could be avoided.

Response 6: See Section A: Response D. Sediment trapping structures or sumps are proposed on all Right-of-Way Diversions (Waterbars). Waterbar spacing is based on the steepness of slope.

Comment 7: The permit must restrict the length of (ROW) under construction at any one time. Requiring restoration of disturbed soils before construction could begin on another section of the pipeline would reduce erosion and sedimentation from the project.

Response 7: DWWM does not have the authority to restrict the length of Right-of-Way (ROW) under construction at any one time.

Comment 8: The project area is underlain by numerous mine pools. Blasting overtop mine pools could have unintended consequences and impacts to water resources. WV-DEP must require analysis of impacts on water resources and mine stability before blasting is authorized.

Response 8: EQM provided an analysis of impacts on water resources and mine stability. A "Coal Bed elevation map" has been added to Appendix H of the SWPPP. As noted on the map, the existing coal beds are located at approximately 160' and 301' in elevation. The proposed earth moving activities associated with this project are much higher in elevation (+/- 998' to 1215'). Due to the vast separation distance of these features, no adverse impacts are anticipated to occur because of this project.

Comment 9: The permit must require that an invasive species plan be included in the permit application. Invasive species must not be planted as soil cover, and active measures to prevent them from growing in the right of way should be included. At a minimum the revegetation of the

right of way should meet the revegetation standards in “SECTION IV” of the “West Virginia Erosion and Sediment Control Field Manual of the Office of Oil and Gas, May 2012.”

Response 9: The SWPPP has been revised to incorporate an Invasive Species Control Plan.

Seeded areas can be mulched with weed free straw at a rate of 2-4 tons/acre (hand spread or blown), fiber mulch hydro-seeded at 1-2 tons/acre or other appropriate material. Natural biodegradable products will be used and materials will be demonstrated to be free of invasive species, including but not limited to plants, pests, and pathogens. All water used for construction use will be hauled from a municipal source so there will be no risk of invasive organism contamination.

Comment 10: The permit must include a requirement for monitoring turbidity. Since WV Water Quality Standards include criteria for turbidity, exceedances of this standard are a violation, and monitoring is required to ensure an enforceable permit. The permittee should be required to conduct monitoring for turbidity at stream crossings after each rain event during construction, and at regular intervals thereafter, to show compliance with the state standards.

Response 10: See Section A: Response A.

Comment 11: Finally, we request that the comment period be extended for an additional 30 days after the additional information requested above becomes available. We received notice of this project only a few days ago, and the notice implies that this was a simple gathering line. Only by reading the permit application in detail does it show that this is a 30-inch pipeline running 25 miles in West Virginia and disturbs over 500 acres (a disturbed zone averaging 165 feet wide). Even then, the reader would not know that the pipeline is actually over 40 miles in length, as it extends some 15 additional miles into Pennsylvania (with proportionate increase in disturbed acreage) transporting 1.2 billion cubic feet per day. The public notice also fails to identify this as an extension of the Mountain Valley Pipeline, although that is clearly indicated on the EQT web page.

Response 11: The draft permit registration was advertised as a Class I Legal Ad in the Dominion Post on November 13, 2018 which opened a 30 day comment period. Also, a public hearing on the draft was held from 6 p.m. to 8 p.m. on December 3, 2018 and the comment period ran for another 10 days. Based on public comments, additional information was requested and received from the applicant. At this time, the Agency has determined that the application meets the terms and conditions of the General Permit and is issuing approval.

See the following activity as it appeared in the Dominion Post: “The proposed EQT Hammerhead D001 WV Pipeline Project (Project) will disturb 503 acres and consists of the installation of approximately 25 miles of 30-inch diameter natural gas transmission

pipeline in Clay, Battelle, Mannington, Church, and Grant Districts in Monongalia, Marion, and Wetzel Counties, West Virginia (WV). The project includes approximately 19 miles of associated access roads and utilization of additional temporary work space as necessary throughout the project area. The purpose of the proposed project is to transport natural gas from EQT's PA development fields to a sales point in Wetzel County, WV”.

Comment 12: The submitted application is inadequate and does not meet the permit requirements for the DEP Oil & Gas Construction Stormwater General Permit.

Response 12: The DWWM review team has a diverse group of employees. The hammerhead application has been reviewed to ensure that all requirements set forth in Water Pollution Control Permit No. WV0116815 are being met.

Comment 13: When will we understand that clean water is life and rivers bring it. Do the right thing! Keep the streams clean!

Response 13: The Agency has reviewed the application and determined it to be complete.

Comment 14: Please enforce the laws and regulations in place and do not allow further degradation of West Virginia’s water and forest and land!

Response 14: The hammerhead application has been reviewed to ensure that all requirements set forth in Water Pollution Control Permit No. WV0116815 are being met.

Section C. Public Comments and Responses

Comment 1: Yeah, it doesn't involve me, but I'm all for it. Even though it doesn't involve me or my land, and that's all I got to really say.

Response 1: Noted

Comment 2: I was born in Tyler County, and inherited 70 acres in Tyler County, and we have gas coming from that property at the present time.

(a) I want to talk about this particular situation. I believe that the name Hammerhead gathering is misleading because it's not gathering from wells here in West Virginia. The same circumstance applied as far as I know to the Stonewall gathering line, which it wasn't connected either and mislead a lot of people. And I'm personally disappointed that the state isn't concerned about whether the public is misled by the companies that come here.

(b) Second item is the staffing at DEP. I have heard almost every time I ask that the various branches at DEP have openings or are understaffed or need an increasing salary so that they can attract personnel. It stands to reason that to the extent that staff is not available to monitor gas lines that they should not be permitted. That's only a rational perspective, particular if we want to protect the state.

(c) The third item is a follow up on that one, because I personally have inspected some aspects of the Rover Pipeline, some aspects of the Stonewall gathering pipeline, some locations for Mountain Valley Pipeline and for the Atlantic Coast Pipeline. And in every case I could see where there was water permeating through, flowing under, flowing over. In many cases soil was being washed and there were no violations being applied.

(d) Four, there is an article in the Reuter's News Service on November 28th that said that the Rover Pipeline and the Mariner East Pipeline had incurred over 800 violations. Now, if that isn't an embarrassment to the industry, then you won't find one. And for the DEP to continue to permit lines and have these violations or have conditions prevailing that are not inspected and to go under the wire, it's an embarrassment to those of us in the public.

(e) Item five, there's an article by Terry Etam in a journal called BOE Report on November the 26th, 2018 entitled Seven Marcellus Natural Gas Myths. And among other things they are saying that the industry is misleading the public and for the industry to being do so and the state not being concerned about it is a real problem. I would like to talk about West Virginia Energy Policy, but I'll submit that in writing. I'd like to talk about Nationwide 12th permits, but I only want to talk to two sentences about that. Now when the West Virginia DEP issued nationwide 12 permits to the Atlantic Coast pipeline and the Mountain Valley Pipeline it was obvious to the

casual observer that this was out of place. I am over 80 years old, I'm a chemical engineer with a background in working in various deals and it was obvious that this was inappropriate. And now the Courts have found so, and yet the West Virginia DEP has not acknowledged that they were in error, that they --- that it was inappropriate and that they had shirked their duty to apply appropriate procedures to these pipelines.

Thank you.

Response 2:

(a) DWWM does not have the authority to question the name of a company nor where it's product is being produced.

(b) The hammerhead application has been reviewed to ensure that all requirements set forth in Water Pollution Control Permit No. WV0116815 are being met.

(c) The DEP Environmental Enforcement (EE) Office will be monitoring the Hammerhead D001 Pipeline Project as often as time and resources allow. EE will remain in contact with EQM, third party inspectors, etc., for the duration of the project.

(d) Noted.

(e) Noted.

Comment 3: I think it's really important that the Agency conduct these public hearings to hear from impacted community members and our members who are concerned about impacts on water.

What we've seen in recent years are widespread systemic issues related to natural gas pipeline construction that have caused sedimentation in streams, cause landslides. We saw an explosion in Marshall County that raised a lot of alarm for the communities where these pipelines are being constructed through some pretty tricky terrain. And I'm going to speak some of the slope issues that we've noticed, but generally, what we have noticed is that this stormwater Construction permit is critical in making sure that companies develop plans that are strong enough to keep pollution from happening in the first place.

And that's our goal, because the cumulative effect of what we're starting to see and have been seeing for a few years now of increased sedimentation in streams certainly has had an impact. And that some of these plans that have been approved by the Agency have not proven affected enough to prevent that pollution.

The first point --- and you will receive written comments from us as well. So I'm just hitting on some high points tonight, but we're preparing those written comments and we'll get those to you by the December 13th deadline.

(a) First, we think it prudent to put in place the - this permit of what we anticipate will be the reissued general Wheeling Gas Stormwater construction permit. And we're waiting for - to hear from the Agency of when that reissuance happens. It seems imminent, and that because construction of this pipeline will not occur until November 2019, it makes sense to make sure that the conditions of this permit align with the enhanced best management practices and the increased frequency of inspections that we hope will be included in that reissued permit. Because we noticed and have surmised that if there were increased inspections in some of these pipelines we've seen that have been in violation, that possible pollution could have been prevented. So that's a very key piece.

The other thing we want to bring your attention to is that this Hammerhead Pipeline impacts two public source water protection areas for public drinking water supplies that's in Pine Grove and also Sistersville.

And for obviously reasons we want to be even more careful within those source water protection areas to use enhanced controls to prevent pollution from happening and that we would strongly recommend a requirement in this permit that if a spill occurs that the company is required to report that to the downstream public water utility.

(b) Second, what we think is lacking here are detailed construction plans for individual stream crossings. What we've seen in other permits -- or I'm sorry, other pipelines in the state is we've learned that one size does not fit all when it comes to stream crossing. We're talking about approximately 128 streams and wetlands being impacted by this pipeline. And the one size fits all has proven not to be effective. So we would urge the Agency to make sure the Company has thought through detailed plans for each of these individual stream crossings. And there are other lessons we can learn from other pipelines. And these are cited in the DEP's inspection reports and notices of violations, where they've seen that we need better protection at the outlets of water bars, and this plan or this application talks about having 18-inch filter socks at those outlets. And we've seen on numerous occasions where that had been enough with other pipelines, especially on these steep slopes that we're talking about. So that needs enhanced clearly.

On the steep slopes, this pipeline, 40 percent of it is being constructed on slopes that are greater than 35 percent. So it brings increased concerns about erosion and landslides. We would recommend that a geologic study be done that looks at the orientation of bedrock up against the topographic slope along these stream crossings and plan accordingly. That if the bedrock is oriented in a way that aligns with the slope, we have a better chance of landslides. And landslides, what we're hearing from and seeing from communities, that's one of the biggest

concerns. It's one of the most catastrophic things that can happen to a pipeline because we saw in near Moundsville an explosion and initial investigation points to land subsidence as a cause of that. So we urge the Agency to require the company to take a close look of where these steep slopes occur, what the geology looks like. And something else we think is lacking is the landslide mitigation plan. It's very vague. We would like --- we need to see much more definition and specificity when it comes to that land slide mitigation plan.

And this is something that EQT as a company should be familiar with. They're building other major pipelines on steep slopes and we would expect to see a lot more specificity about how they're prepared.

And that's I think what the community wants to see, is knowing that this company has thought through a catastrophic scenario and is equipped and prepared to prevent that and if --- in the worst case scenario prepared to mitigate the effects of that.

Another lesson learned is that sediment traps would be beneficial on these steep slopes. There's an absence of that in other pipelines and think that it could be another enhanced control or measure to keep.

If sediment is eroding off the construction site that it's caught in these pounds before it gets in a 21 water body or drinking water source.

Another recommendation we have, a lesson learned from other pipelines, is to put in this permit a restriction around the length of the right-of-way that is exposed or under construction at any given time.

And what we would recommend is that the construction site they're working on --- that stretch they're working on is restored before starting another spread. So that's covered up, that's stabilized before exposing soils and disturbing earth on another spread. Specific to this pipeline, it crosses over quite a bit of mine pools, coal mining pools and that's an added concern especially around blasting. So we would want the Agency and the company to take a much more careful look around the possible impacts of blasting through those mine pools that exist along the route. Just a few more things to mention. You know, we're concerned about erosion that occurs while construction is underway, but what we're seeing a lack of here are specific stream restoration plans.

And we think that's very important to preventing chronic and avoiding chronic erosion. So we'd like to see that added to this permit is specific plans around stream restoration.

We'd like to - we think it's important to include an invasive species plan. So when reclamation occurs that that is considered and would urge that the permit be enhanced to conform with Section Four of DEP's erosion and sediment control field manual.

And finally, you know, one thing we've given a lot of thought to of how to keep an eye on what's happening in stream downslope from these pipelines. And we have a water quality standard around turbidity and think it would behoove the Agency's efforts, citizen monitoring efforts, prevention to understand what's happening with turbidity in the stream. And think it's appropriate that the company be responsible for monitoring turbidity at a frequent basis at these crossings.

So that hits the high points, and you'll hear more from us in writing.

Thank you.

Response 3:

(a) See Section A: Response C. Pine Grove Water is located on North Fork of Fishing Creek approximately 6.9 miles downstream of the proposed crossing. Sistersville Municipal water is located on the Ohio River approximately 47.3 miles downstream of the proposed crossing and approximately 11.3 miles downstream of the confluence North Fork of Fishing Creek and the Ohio River. Enhanced BMPs will be incorporated throughout the entire project area.

Any unauthorized discharging, leaking, releasing, pumping, pouring, emitting, emptying, injecting, leaching, escaping, dumping or disposing of any material into the natural environment – on the ground, surface waters, ground waters, etc. is prohibited. This includes but is not limited to, any spill of oil, lubricant, grease, sediment to water, chemicals, gases, condensate, hazardous substances and hazardous wastes. All spills will be promptly reported to the Environmental Coordinator for further analysis and reported to the appropriate regulatory agency when required. EQM will notify downstream utilities in the event of a spill, bypass, or upset that has potential to contaminate North Fork of Fishing Creek.

(b) See Section A: Response A Water Quality, Section A: Response B. Waterbody Crossings and Section A: Response D. Additional BMPs.

A “Slide Mitigation Report” has been added to Appendix I of the SWPPP. This report addresses potential post-construction landslide hazards for the pipeline listed below. The route of this line was analyzed to determine if mitigation controls placed during construction are necessary to avoid potential landslide issues following construction. Potential landslide sites were identified by a desktop analysis that considered previous landslide activity, slope steepness, and sidehill construction. EQT Design Engineering has determined that some or most of the locations along the pipeline require some form of additional surface or subsurface drainage control to mitigate potential slides. A summary of the required mitigation controls can be found in *Section 4.0*. A plan view showing the

locations and extents of the controls for each site can be found in *Appendix A*, and details for the controls are provided in *Appendix B*.

EQM provided an analysis of impacts on water resources and mine stability. A “Coal Bed elevation map” has been added to Appendix H of the SWPPP. As noted on the map, the existing coal beds are located at approximately 160’ and 301’ in elevation. The proposed earth moving activities associated with this project are much higher in elevation (+/- 998’ to 1215’). Due to the vast separation distance of these features, no adverse impacts are anticipated to occur because of this project.