May 18, 2022

Policy Office
PA Department of Environmental Protection
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Re: Draft Trenchless Technology Technical Guidance Document, *DEP ID: 310-2100-003*, [52 Pa.B. 1693] submitted electronically via https://www.ahs.dep.pa.gov/eComment/

The Marcellus Shale Coalition (MSC), a regional trade association with a national membership, appreciates the opportunity to submit comments regarding the above-referenced proposed rulemaking. The MSC was formed in 2008 and is currently comprised of approximately 115 producing, midstream, transmission and supply chain members who are fully committed to working with local, county, state and federal government officials and regulators to facilitate the development of the natural gas resources in the Marcellus, Utica and related geological formations. Our members represent many of the largest and most active companies in natural gas production, gathering, processing and transmission, in the country, as well as the suppliers, contractors and professional service firms who work with the industry.

The MSC offers the following comments for consideration by the Pennsylvania Department of Environmental Protection (PA DEP or Department).

Comment and Response Document

The MSC strongly encourages the EQB to include a key, code, or other method in its development of the Comment and Response Document which allows public commentators to identify its comments in the document and how the EQB has responded. The EQB previously has prepared its Comment and Response Documents in this manner, which is extremely helpful and efficient. Such a method also underscores that the EQB has identified and fairly considered all unique comments which it received during the public comment period.

Technical Guidance Documents

The intent of a Technical Guidance Document (TGD) is not to create new regulatory requirements, but rather to provide guidance both to Department staff and the regulated community on potential pathways to achieving compliance with existing statutory and regulatory standards. While the TGD uses certain words such as “recommend” and “suggest”, in reality this document presents as a regulatory document that imposes new obligations upon the regulated

community. It is impossible for a regulated entity that depends upon its regulator for the permits necessary to stay in business to interpret these standards as anything other than regulatory obligations. It is clear that the TGD as written does impose binding requirement on regulated parties and is, therefore, rulemaking without following the legally require procedures.

The MSC recommends that the TGD be re-written in a manner that makes clear the provisions of the TGD are merely suggestions; are not the default or mandatory requirements which the Department expects the regulated community to adhere to; and that additional pathways to compliance are both acceptable and will be fairly considered by the Department.

Draft Trenchless Technology Technical Guidance Document Process

In 2018 the PA DEP formed a multistakeholder workgroup comprised of industry experts and environmental groups. The workgroup met several times and was provided a single draft (July 25, 2019) to provide comments on. The MSC worked through its representative and developed extensive technical and constructive comments (25 pages in length). These comments were well thought out and provided a significant amount of information and clarification to improve the clarity of the draft. The comments were submitted to the Department on November 11, 2019. Since then, the PA DEP has not scheduled another multistakeholder workgroup meeting to review the comments received or a revised draft prior to publication for a formal public comment period (March 19, 2022).

The MSC workgroup representative made a request for the workgroup to meet again to discuss the comments received prior to the formal public comment period. This request was declined by the Department, and the workgroup was not provided the opportunity to review the revised version prior to this formal comment period. The MSC is disappointed that the request in 2019 to reconvene the multistakeholder workgroup and provide constructive feedback to the PA DEP was declined. Upon review of the draft TGD published for public comment, the Department did not consider many of the MSC's comments. Had the multistakeholder workgroup reconvened, the MSC believes that many of these issues could have been worked out in advance of the draft TGD being published for public comment. Significant time for constructive engagement has been lost over these past two and one-half years.

Trenchless Technologies Webpage

The original draft reviewed by the multistakeholder workgroup was approximately 116 pages and contained flowcharts, example templates, letters, and other information associated with the draft TGD. The MSC provided comments in November 2019 on this information as well. The draft TGD that was published on March 19, 2022, did not include any of these documents and was reduced to approximately 75 pages in length. The Department uploaded all of this information to its Trenchless Technologies Webpage[1] as draft documents and seemingly did not include these documents as part of the draft TGD formal public comment. However, within the draft TGD there are at least 20 references to the Webpage for commenters to find additional,

[1] https://www.dep.pa.gov/About/Regional/RPCO/Pages/Trenchless.aspx

necessary information. It is clear that from a functionality perspective, the Department regards the information on the website as integral and therefore an extension of the TGD. As such, it would have been helpful and appropriate to have included this information as part of the formal TGD document published for public comment. The MSC recommends that the final TGD incorporate the information from the webpage. Additionally, the MSC urges the Department to pledge not to unilaterally change this information going forward without soliciting public input. Recent examples where the Department has unilaterally changed permit criteria and specifications online, well after the final publication of the document, have raised concerns about the validity and transparency of the public input process.

Applicability (Page i)

The applicability statement is vague, and it is unclear throughout the document where and when this guidance applies. The Department should clearly state where and when this TGD applies. Because the Trenchless Technology TGD and Alternatives Analysis TGD are interrelated, the MSC recommends using an adaptation of the applicability statement found in the draft Alternatives Analysis TGD, which states: "*This guidance applies to all proposed projects involving a water obstruction or an encroachment located in, along, across, or projecting into an aquatic resource that are not eligible for a general permit, emergency permit, or do not qualify for a waiver of permit requirements. (25 Pa. Code § 105.13(e)(1)(viii)).*"

The MSC recommends the following applicability statement for the Trenchless Technology TGD:

"**This guidance applies to all proposed crossings of an aquatic resource that utilize a trenchless technology and that are not eligible for a general permit, emergency permit, or do not qualify for a waiver of permit requirements. (25 Pa. Code § 105.13(e)(1)(viii)).**"

Disclaimer (Page i)

This section reads as follows:

"*The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.*

The policies and procedures herein are not an adjudication or a regulation. DEP does not intend to give this guidance that weight or deference. This document establishes the framework, within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy if circumstances warrant."

The MSC recognizes that this is standard language which the Department includes in nearly all of its policies or Technical Guidance Documents. Nonetheless, the language should be clarified as it is reasonable to interpret the statement "*…are intended to supplement existing requirements*" as imposing *additional* requirements beyond those which exist in current statute or regulation. Read in its totality, the above section appears contradictory and may reasonably imply to the reader that the Department is imposing policies and procedures which have a

regulatory impact. This standard disclaimer, while often used by the Department, is inaccurate in its description and should be modified accordingly.

Section 1. Introduction (Page 1)

Background (Page 1)

In the second paragraph the draft TGD states that it is the project proponent's responsibility to perform the due diligence if a trenchless technology is selected. However, the Department may request the project proponent to provide all of the information in the draft TGD, regardless of scope. This certainly sounds like the entirety of the document is required to be followed and Department reviewers will utilize this paragraph to request all information from applicants regardless of the document's intended use as guidance and the project size and scope. The MSC requests that this be removed from the draft TGD.

At the bottom of Page One, the draft TGD states that Plan contents and attachments required for permitting are also identified. The use of the term "required" is utilized here. This would mean that the plan contents and attachments seemingly recommended within the TGD are now a requirement of the project proponent. As discussed previously, this is not appropriate for a TGD, and the word "required" should be removed from the document. It bears repeating – not only for the benefit of the regulated community, but for the certainty of DEP field staff: TGDs cannot impose requirements upon the regulated community. Despite verbal, and at times written, assurances from Department central staff to this effect, the experience of permittees is rife with examples where Department permitting and compliance staff refuse to issue a permit or sign off on a project unless the TGD standards are adhered to.

Definitions (Pages 2-6)

Cross bore - *A cross bore is the intersection of an existing underground utility or underground structure by a second utility installed using trenchless technology. This results in an intersection of the utilities, compromising the integrity of either or both utility or underground structure.*

The Department's proposed definition assumes that these installations always hit each other, which is not always the case. This should be clarified with the insertion of potential.

Cross bore - *A cross bore is the intersection of an existing underground utility or underground structure by a second utility installed using trenchless technology.* ***The potential exists for*** ~~***results in***~~ *an intersection of the utilities, compromising the integrity of either or both utility or underground structure.*

Dry Hole *- Drilling term; a condition that occurs when the drilling tools advance beyond the drilling mud. Typically caused by trying to advance the borehole too quickly (DTD, 2009).*

The MSC recommends that the second sentence of the definition be removed. It is not appropriate for examples and scenarios to be within definitions. Definitions should factually define a term, and nothing more.

The MSC recommends that the second sentence of definition should read ***Dry Hole*** *- Drilling term; a condition that occurs when the drilling tools advance beyond the drilling mud.* ~~***Typically caused by trying to advance the borehole too quickly (DTD, 2009).***~~

Environmental Risk *- Risk is defined as the chance or probability of an event that exposes something or someone to a specific level of danger and peril. For every event, there is a cost. These costs can be monetary, affect schedule, affect finished product, or affect the environment. Risks associated with trenchless technologies can involve various factors, including ground settlement, ground heaving, subsidence, opening of voids, sinkholes, movement of sensitive buildings, inadvertent returns, impacts to water supplies, impacts to the environment, changed ground conditions, broken down-hole tooling, damage to third-party property, and damage to other utilities and structures (adapted from Doherty, 2019). Please refer to Appendix A.*

The MSC recommends removing "broken down-hole tooling, damage to third-party property, and damage to other utilities and structures" from the definition, as they would not seem to be appropriate to include under the definition of Environmental Risk.

Inadvertent Return *- An unauthorized discharge of drilling fluids and associated drilled spoils to the surface of the ground or surface waters, including wetlands, associated with HDD or other trenchless construction methodologies (adapted from DEP's Standard Operating Procedures (SOPs) Regarding Inspection and Compliance of Trenchless Construction Methodologies Associated with DEP Permits)*

The MSC recommends that the word unauthorized be removed from the definition and replaced with unanticipated. If the project proponent assesses the risk of an inadvertent return using the TGD, the Department approves the project and an inadvertent return still occurs, this would be an unanticipated discharged and not an unauthorized one.

Large and Complex Projects *- A project that by its nature is larger or more complex from a technical standpoint than a standard project. Since this document is regarding trenchless technologies, the focus is on subsurface conditions and other related factors (adapted from DEP's Policy for Implementing the Department of Environmental Protection Permit Review Process and Permit Decision Guarantee, 021-2100-001).*

This definition is extremely confusing and vague. The focus of the draft TGD is on the crossing and not the project. A project could be "large and complex" but the actual crossings relatively straightforward and fundamental to complete. This definition will confuse both the Department reviewers and the project proponents. The Department should consider updating this definition to:

Large and Complex ~~***Projects***~~ ***Trenchless Technology Crossings*** *- A* ~~***project***~~ *trenchless technology crossing proposed that by its nature is* ~~***larger or***~~ *more complex from a technical standpoint than a standard* ~~***project***~~ ***crossing****. Since this document is regarding trenchless technologies, the focus is on subsurface conditions and other related factors (adapted from*

DEP's Policy for Implementing the Department of Environmental Protection Permit Review Process and Permit Decision Guarantee, 021-2100-001).

Trenchless Technology - *A type of subsurface construction work that requires few trenches or no trenches which includes any trenchless construction methodology, including, without limitation: horizontal directional drilling, guided auger bore, cradle bore, conventional auger bore, jack bore, hammer bore, guided bores, and proprietary trenchless technology (adapted from Pennsylvania Environmental Hearing Board Docket No. 2017-009-L).*

The MSC recommends the following edits to the proposed definition:

Trenchless Technology - *A type of subsurface construction work that requires few trenches or no trenches which includes any trenchless construction methodology, including,* ***but not limited to ~~without limitation:~~*** *horizontal directional drilling, guided auger bore, cradle bore, conventional auger bore, jack bore, hammer bore, guided bores, and proprietary trenchless technology (adapted from Pennsylvania Environmental Hearing Board Docket No. 2017-009-L).*

Under the Applicability Section, Page 2 the Department states, "This guidance document may not be necessary for small-scale projects that pose little to no risk to environmental resources." What is a "small-scale project"? This should be added to the list of definitions if it is a new term and utilized in the TGD. The MSC recommends that it should be titled "Simple and/or Less Complex Crossing" to be in line with the "Large and Complex" definition provided in the draft TGD.

Section 2. Suitability, Feasibility, and Environmental Considerations (Page 7)

All of the information in this section should be recommendations and are not required by current regulation or statute. However, in the second paragraph the Department states that, *"The Site Suitability Analysis outlines the need for a desktop assessment of existing environmental considerations (for all drilling proposals) ....."*The words "need" and "all" provide the interpretation that this is a requirement.

Further, the Department references the Bore & Horizontal Directional Drill (HDD) Flowchart on the Trenchless Technologies Webpage. Upon review of the flowchart there is seemingly nothing in it to remove a project proponent from the required analysis. For example, if the proposed crossing encountered an ephemeral or intermittent stream channel it would likely not need an analysis if construction could likely take place during dry or low flow conditions. Lastly the title of the Flowchart should be updated to the Trenchless Technology Flowchart to be consistent with the TGD. The MSC recommends that the Flowchart be part of the final published document, per our earlier comment regarding the Trenchless Technologies Webpage.

In the third paragraph the Department states, *"The Feasibility Analysis should provide conclusions and recommended construction methods for the various types of crossing (e.g., road, stream, wetland, groundwater, or reservoir). The recommended Feasibility Analysis should include a decision matrix for use of trenchless technology construction as the* ***least environmentally impacting alternative****."*

The word "practicable" should be inserted into the last sentence. For example, if open cutting a state road is not allowed, then it is not a practicable option. Please see below the updated paragraph:

"The Feasibility Analysis should provide conclusions and recommended construction methods for the various types of crossing (e.g., road, stream, wetland, groundwater, or reservoir). The recommended Feasibility Analysis should include a decision matrix for use of trenchless technology construction as the ***least environmentally impacting practicable alternative****."*

In the fifth paragraph the Department states, *"Any considered alternatives to minimize potential adverse environmental impacts should be identified in the Site Suitability Analysis and Feasibility Analysis. For more information on alternatives analysis guidance, see DEP's Chapter 105 Alternatives Analysis Technical Guidance Document (310-2100-002)."*

The MSC points out that Chapter 105 General Permits are not required to prepare an alternatives analysis. The MSC recommends that the Department make mention of crossings that qualify for a Chapter 105 General Permit.

In the final paragraph the Department states, *"For large and complex projects, DEP recommends that a summary of the results from the Site Suitability Analysis and Feasibility Analysis are incorporated into the public participation process, so stakeholders can have an opportunity to become familiar with the project. For more information, see DEP's Policy on Public Participation Policy in the Permit Review Process (012-0900-003)."*

Per the MSC's comment on the definition, this should be for Large and Complex Trenchless Technology Crossings not Projects. In addition, public participation in the permit review process is not a requirement of crossings that quality for coverage under Chapter 105 General Permits.

The MSC recommends that the Department make mention of crossings that qualify for a Chapter 105 General Permit.

Site Suitability Analysis (Page 8)

In the last two sentences of the first paragraph the Department states, *"Project proponents should be prepared to support their evaluations with documentation and explain why any of the following items were not evaluated. An incomplete investigation and analysis of information necessary for the adequate review of the project may impede the permit review process."*

The MSC is concerned that these statements provide the opportunity for reviewer subjectivity on what is "required" to be included and not included as part of the analysis. The statements above will lead reviewers to ask for all items to be evaluated thus requiring everything listed in the TGD. It does not provide an opportunity for the project proponent to provide the appropriate amount of due diligence commensurate to the complexity of the trenchless technology crossing. The MSC requests that this be reworded to reflect that and eliminate reviewer subjectivity.

Existing Surface Conditions – Topography (Page 8)

In the second sentence of the paragraph on Topography the Department states, *"This is an environmental risk metric that looks at the difference in elevation between the entry and exit points of a trenchless technology."*

The MSC contends that this is a "feasibility" risk and not an "environmental" risk. We recommend the Department replace the word environmental with feasibility.

Further in the paragraph, the Department states, *"DEP recommends project proponents pay special attention to crossings with elevation differential between entry and exit points. For example, a 100-foot elevation differential between entry and exit points may be a reasonable benchmark of elevation difference. However, a 100-foot elevation differential can be overcome, and the industry has successfully completed projects with even larger elevation differentials."*

The MSC recommends that the example be deleted. While 100-foot elevation differential has been overcome in certain instances, it is inappropriate for the Department to state that the industry has completed it and suggest, therefore, that it may be routine within the industry. This elevation difference may not be overcome in some strata areas. We recommend that the paragraph be rewritten as follows:

"DEP recommends project proponents pay special attention to crossings with elevation differential between entry and exit points. ~~***For example, a 100-foot elevation differential between entry and exit points may be a reasonable benchmark of elevation difference. However, a100-foot elevation differential can be overcome, and the industry has successfully completed projects with even larger elevation differentials."***~~ *Please also refer to PASDA as a possible source of topographic data.*

Subsurface Conditions – Soil Interfaces and Geologic Contacts (Page 10)

The Department states, *"Geotechnical test borings should be used to confirm any desktop research data concerning soil-bedrock interface depth."*

According to the Draft Bore & HDD Flowchart, Geotechnical test borings are recommended only if the analysis progresses to Phase 4. The MSC recommends that the Department reference this and change the word "should" to "may".

Subsurface Conditions – Existing Utilities (Pages 12-13)

In the last paragraph the Department states, *"Project proponents should not solely rely on Pennsylvania One Call and local municipality knowledge but should also attempt to conduct detailed field reconnaissance to observe and identify any signs of existing utilities"*

The term "should", while appearing to be optional, is in reality interpreted by the regulated community as an obligation or mandate. The MSC suggests that the term "should" be replaced with the term "recommends".

In addition, the investigation of existing public or private utilities without consent from these companies is not appropriate or permitted, *"…attempt to conduct detailed field reconnaissance to observe and identify any signs of existing utilities."*

Subsurface Conditions – Existing Utilities, Cross Bores (Page 13)

The Department states in the second sentence of the paragraph, *"This results in an intersection of the utilities, compromising the integrity of either or both utility or underground structure."*

The MSC commented previously on the definition of Cross Bores. The definition and the statement above presume that the trenchless technology and utility will come into contact every time. This should be edited to state potentially compromising, shown below:

"This results in an intersection of the utilities, ***potentially*** *compromising the integrity of either or both utility or underground structure."*

Subsurface Conditions – Existing Utilities, Excavation Damage (Page 13)

In this paragraph the Department states, *"The biggest risk to pipeline integrity is excavation damage. This guidance document considers all uses of trenchless technologies, but gas and liquid pipelines crisscross the Commonwealth and any subsurface activity with the potential to damage existing pipelines presents significant risks to those pipelines and to the subsurface activity. Any damage to a gas or hazardous liquid pipeline facility has the potential to both migrate and ignite. The safety and environmental implications from ignitions or explosions can be catastrophic. Hazardous liquid pipelines can contain a variety of liquid products with varying properties. Some of these products can cause environmental devastation. Product migration should be modeled to understand these potentials. Pipelines are installed by both HDD and conventional trenching and are crossed or paralleled by HDD and trenchless technology applications throughout the Commonwealth. The installation of any infrastructure via trenchless technology could potentially lead to pipeline failures."*

The MSC recommends removing all but the first two sentences of this paragraph. It is irrelevant to the purpose of the draft TGD and does not provide any substantive recommendations or guidance. It is obvious that project proponents that propose trenchless technologies will complete the necessary due diligence and receive the appropriate approvals prior to proceeding. The MSC proposes the following changes to the paragraph:

"The biggest risk to pipeline integrity is excavation damage. This guidance document considers all uses of trenchless technologies, but gas and liquid pipelines crisscross the Commonwealth and any subsurface activity with the potential to damage existing pipelines presents significant risks to those pipelines and to the subsurface activity. ~~***Any damage to a gas or hazardous liquid pipeline facility has the potential to both migrate and ignite. The safety and environmental implications from ignitions or explosions can be catastrophic. Hazardous liquid pipelines can contain a variety of liquid products with varying properties. Some of these products can cause environmental devastation. Product migration should be modeled to understand these***~~

~~***potentials. Pipelines are installed by both HDD and conventional trenching and are crossed or paralleled by HDD and trenchless technology applications throughout the Commonwealth. The installation of any infrastructure via trenchless technology could potentially lead to pipeline failures."***~~

Subsurface Conditions – Unconsolidated Material (Page 14)

In the final paragraph of this section the Department states, *"Following the initial desktop review, DEP expects project proponents to characterize field conditions through the gathering of site-specific information. Depending on the size and complexity of the project, this can include borings and other subsurface field investigations as identified in Section 2.B.3 of this guidance document."*

The MSC highlights the word "expects" and defines it as a requirement. The intent of this document is guidance and there is no accompanying statute or regulation cited. The MSC recommends that the word "expects" be replaced with "recommends"

Subsurface Conditions – Locate Public Water Supplies, Public Information Act for Locations (Page 16)

The Department states, *"The location of public water supplies may be considered sensitive and protected; therefore, information not obtainable through eMapPA may require direct coordination with local water supply companies or DEP's Bureau of Safe Drinking Water. The Bureau of Safe Drinking Water is charged with managing the federally delegated drinking water program and implements both the federal and state Safe Drinking Water Act and associated regulations. The Bureau of Safe Drinking Water can be contacted at RA-epwater@pa.gov."*

The MSC has concerns over this recommendation in the draft TGD to locate public water supplies. We believe that this remains a US Homeland Security issue and the location of these facilities may not be available even with direct coordination. Further, has the PA DEP Bureau of Safe Drinking Water been notified that project proponents proposing trenchless technologies will begin contacting their office for information on the location of drinking water supplies? Is the Bureau readily prepared and open to provide the information requested?

Subsurface Conditions – Local Private Water Supplies, Horizontal Offset (Page 17)

Within the paragraph the Department states, *"…the distance from alignment measured from the centerline of the pipeline or utility line, giving the project proponent the area that DEP expects to be investigated for the existence of private water supply wells. After careful consideration of multiple factors, DEP recommends identifying private wells within a minimum horizontal offset distance of 450 feet in non-karst terrain and a minimum of 1,000 feet in karst terrain or areas that include limestone and dolomite bedrock. DEP expects any project proponent to use their best professional judgement when choosing to exclude parcels and water supplies that are crossed by intersecting geologic structures (e.g., faults, fractures), but outside of the recommended minimum horizontal offset distance. DEP recommends that any project proponent*

evaluate when this horizontal offset distance should be expanded due to local geological conditions."

The MSC highlights the word "expects" as a requirement of the project proponent within the draft TGD. The MSC recommends that the word "expects" be replaced with "recommends" being more consistent with a guidance document.

Subsurface Conditions – Local Private Water Supplies, Well Recon Listing (Page 17)

In the final paragraph the Department states, *"DEP recommends researching current tax parcel information and assuming each parcel has a well location until documented facts prove otherwise."*

The MSC has concerns with the Department stating that a project proponent should assume that a well exists on every property. It would be extremely challenging in that a considerable amount of time and resources would be spent trying to find things that may not exist. The MSC recommends removing this portion to not make this overly burdensome. If it is a residence or inhabited structure outside a PWSA, this may be reasonable, but not for ALL Parcels.

Subsurface Conditions – Local Private Water Supplies, Tax Parcel Mailing List (Page 18)

Within the paragraph the Department states, *"Many parcels outside of the service area of a public water system and some parcels inside of the service area of a public water system may have a private well, so it is imperative to include all tax parcels on the mailing list and assume each parcel in or outside of the service area of a public water system has a well until facts prove otherwise."*

The MSC disagrees on including ALL tax parcels on the mailing list with the assumption that each has a private well. Areas within the public water supply should not be required to be included on the mailing list.

Subsurface Conditions – Local Private Water Supplies, Well Construction Details (Pages 18-19)

The Department provides a table of information that they recommend for project proponents to collect with several "critical" items. It states, "*Table 2.1 below lists the information that DEP recommends gathering. Information denoted with an asterisk (*) are considered the most critical. This information may be available from municipal records, the independent well driller (i.e., the contractor) that installed the well(s), or interviews with the well owner or operator (see Section 3.B.6).*"

Table 2.1. Recommended Data to Gather on Well Construction Details
1. GPS Coordinates of Wellhead *
2. Date Well Constructed *
3. Depth of Well *
4. Depth to Bedrock*
5. Depth to Bottom of Casing *
6. Method of Well Construction, including:
a. Primary and Secondary Filter Pack
b. Type of Annular Seal
c. Grout Seal Interval (top and bottom)
d. Type of Surface Seal
e. Protective Casing
7. Method of Well Installation
8. Casing Diameter
9. Casing Material
10. Water Bearing Zones
11. Static Water Level
12. Use of Well
13. Blown Yield
14. Primary Aquifer
Note: Items marked with an asterisk (*) are most critical; all others are recommended.

The MSC points out that this is a significant amount of information for a project proponent to be required to collect from a private landowner. The MSC interprets the word "critical" to mean required. PA DEP should acknowledge that access to private landowner property and private water wells is not typically provided. Contacting an "independent well driller" regarding well construction details is not an option for several reasons.

Field Investigation – Geotechnical Investigation (Pages 19-20)

The Department states, *"Geotechnical Investigation should be conducted, as necessary, based on the evaluation of risk (see Appendix A) of the trenchless technology used, but is especially important for HDD. A complete geotechnical investigation report should be prepared and sealed by a Pennsylvania-licensed professional engineer (PE). The geotechnical investigation and associated report should include a borehole investigation. The borehole should match, or exceed, the depth of the trenchless technology being employed (i.e., depth of profile) to correlate to the drilling profile. The number of borings should be determined by what is needed to adequately characterize the subsurface formation."*

The Department does not have the authority to require a complete geotechnical investigation report, signed and sealed by a licensed geotechnical engineer for an HDD without updating the regulations. It is inappropriate to included this in guidance and the MSC recommends that this

requirement should be removed from the document. A geologic investigation should be at the discretion of the project proponent.

Field Investigation – Geotechnical Investigation (Page 20)

In that same paragraph the Department states, *"DEP recommends that test borings are generally drilled no more than 100 feet from the proposed drill path and at intervals not greater than 300 feet. In some situations, shorter intervals may be necessary to adequately define subsurface conditions. The geotechnical investigation, and subsequent borehole investigation, should be conducted by a licensed professional geologist (PG), or a licensed PE, with knowledge of the local geology."*

Industry experts have stated that it may be difficult to meet the 300-foot borehole spacing "recommendation". The use of "recommend" and "generally" appear to be recommendations however "not greater than" is a requirement that does not provide an opportunity for a licensed professional to prepare a design. Spacing intervals "not greater than 300 feet" is not consistent with industry best management practices, and increased impacts can result when accessing boreholes in areas due to terrain, waterbody/features, etc. Some locations may require boreholes in shorter intervals but that should be based on sound engineering judgment. PA DEP reviewers will take these values as requirements rather than recommendations.

Field Investigation – Geotechnical Investigation (Page 20)

Further in the same paragraph the Department states, *"The geotechnical investigation, and subsequent borehole investigation, should be conducted by a licensed professional geologist (PG), or a licensed PE, with knowledge of the local geology. Any information gathered should be logged with oversight by a licensed PG."*

These professionals are often not available for fieldwork nor is it cost effective for them to be utilized for this manner. A "designee" should be allowed to conduct the investigation under the licensed professional's direction just like other engineering/geologic work that is performed.

Field Investigation – Licensed Professionals (Page 22)

In the last paragraph the PA DEP states, *"All individual drilling segments of a project need to be individually signed and sealed by the professional that made the interpretation of the data for that segment. An overarching signature for an entire large and complex project is not acceptable."*

The MSC questions the authority of the Department to require each drilling segment to be individually signed and sealed by a licensed professional. Licensed professionals sign and seal packages for all other industry permits and not individual segments. This is not necessary and seemingly overkill, as the licensed professional takes responsibility for the project when they sign and seal it. Further, the term "large and complex project" should be revised per the MSC's prior comment in the definitions section.

Feasibility Analysis (Page 22)

In the first paragraph the Department states, *"Once a project proponent has proposed their preferred alternative and have completed a Site Suitability Analysis, DEP expects the project proponent to complete a Feasibility Analysis."*

MSC highlights the word "expects" thus indicating a requirement of the project proponent not founded in statute or regulation. This should be replaced with "recommends."

Feasibility Analysis (Page 22)

In the second paragraph the Department states, *"To accurately determine the least environmentally impacting alternative, the site-specific Feasibility Analysis should not rely upon desktop resources for identifying wetlands, streams, and other aquatic resources. Rather, a field delineation of all waters of the Commonwealth, including wetlands, must be conducted as the basis for the site-specific Feasibility Analysis. A Preliminary Jurisdictional Determination from the United States Army Corps of Engineers is recommended."*

The United States Army Corps of Engineers (USACE) rarely processes Section 404 permits for pipeline projects in Pennsylvania with a Preliminary Jurisdictional Determination. These applications are typically processed via a "No JD". The MSC recommends that this sentence be removed because it is not in line with how the USACE typically processes 404 permit applications in Pennsylvania.

Environmental Considerations and Analysis (Page 23)

The Department introduces a new analysis that "should" be completed, and it includes, *"The project proponents should prepare an Environmental Analysis that addresses all features covered under 25 Pa. Code § 105, including:*

- *Type (e.g., forested wetland) and Size of Wetland*
- *Threatened and Endangered Species*
- *Wild and Stocked Trout Streams*
- *Exceptional Value (EV) wetlands*
- *EV and High Quality (HQ) streams*
- *Regimen and ecology of the watercourse or body of water*
- *Water quality*
- *Stream flow*
- *Fish and wildlife*
- *Aquatic habitat*
- *Instream and downstream uses*
- *Other significant environmental factors"*

The MSC questions the new requirement and would like to understand what an "Environmental Analysis" is? Is the Department referring to the Resource Identification, which is required for a Water Obstruction and Encroachment Permit?

This section is unnecessary since these items would be addressed as part of the Water Obstruction and Encroachment Permit. To eliminate duplicative requirements, the MSC recommends simply stating that the appropriate Chapter 105 permits/authorizations are necessary for wetland and stream crossings which includes structures placed in, along, under, across or over the regulated waters of this Commonwealth and that a review of the Pennsylvania Natural Diversity Inventory (PNDI) is necessary to determine if the project has potential impacts to Threatened or Endangered species.

Section 3. Design and Permitting (Page 24)

In the first paragraph the Department states, *"The results of the Site Suitability Analysis, Feasibility Analysis, and Environmental Analysis, including the field investigations (e.g., geotechnical, geological, geophysical), should be included in the design and permitting documents. If a trenchless technology method (e.g., HDD) is sought and determined to be suitable and feasible, supplemental field investigations should be conducted to determine the requirements of the proposed trenchless technology construction, including appropriate drill entry and exit locations."*

The MSC presumes that the permitting document referenced in this paragraph refers to a stream and/or wetland crossing permit where the trenchless technology is being proposed. It is not clear in this instance or elsewhere in the document what permits apply.

In addition, the MSC points out the use of the word "should" that indicates the completion of the Site Suitability Analysis, Feasibility Analysis, Environmental Analysis, and supplemental field investigations are all requirements of the permit being applied for by the project proponent. These should simply be recommendations, as there is nothing in current statute or regulation that requires these items.

Design – Inadvertent Returns (IRs) (Page 25)

In the last sentence of the paragraph the Department states, *"At a minimum, the PPC Plan should include a risk assessment for IRs and measures to prevent, control, or mitigate loss of circulation."*

The MSC asks the Department to provide clarification on the recommendation to include a risk assessment for IRs. This is not defined or required as part of the Chapter 78a.68a regulations. This should only be a recommendation if the Department provides a definition for the term in this instance.

Design – Hole Flush (Page 26)

The Department states, "Another area a project proponent should be concerned with, and should consider, is hole flush considerations. Specifically, DEP recommends that the volume of fluid that could be potentially held in the dry hole section should be estimated and the project proponent should ensure adequate containment measures are in place. This is critical on any trenchless technology with significant elevation differential between the entry and exit points. Hole flush considerations should ensure that all fluids can be contained within the workspace."

The MSC is confused by the requirements / recommendations in this paragraph. The recommendation of providing adequate containment for the entire dry hold section is not feasible, especially for large drills. The project proponent could provide containment for only where the bore has the potential to drain. Realistically, depending on the size of the drill, it is not feasible to have containment for an entire annulus full of mud or water. The Department should consider revising this paragraph.

Design – Water Supplies (Page 27)

In the first paragraph the Department states, *"During the design phase, project proponents should consider all water supplies, including surface and groundwater. Project proponents should provide notification, including detailed design plans, to all users and managers of water supplies. It is recommended that notifications and requests for permission to sample and test water supplies take place before starting site preparation work, including vegetation clearing."*

The term "should", while appearing to be optional, is in reality interpreted by the regulated community as an obligation or mandate. The MSC suggests that the term "should" be replaced with the term "recommends".

Design – Water Supplies (Page 28)

In item g. the Department states, *"Project proponents should update their designs and sampling methods for private and public water supplies based on the well construction details collected in Table 2.1 and industry standard sampling methods (referenced in the Data Resource List available on DEP's Trenchless Technologies webpage."*

The term "should", while appearing to be optional, is in reality interpreted by the regulated community as an obligation or mandate. The MSC suggests that the term "should" be replaced with the term "recommends".

Design – Water Supplies (Page 28)

In item h. the Department states, *"Project proponents should develop and provide a water supply well sampling protocol that includes: what constituents will be sampled, the distance from the proposed centerline of the project corridor to be sampled, reasons for sampling constituents and distances based on geologic findings, a mode of sharing test data, and an explanation of the results."*

There is nothing in statute or regulation that requires a project proponent to develop and provide a water supply well sampling protocol for a trenchless technology activity. In addition, the MSC is confused on who a project proponent would provide this to and for what purpose. We recommend deleting this item.

Design – Water Supplies (Page 28)

In item i. the Department states, *"Project proponents should develop a plan for situations where water sources have existing contamination or high background levels of certain constituents. To assist in conveying water quality results and notification of USEPA maximum contaminant level (MCL) exceedances, if observed, an example letter can be found on DEP's Trenchless Technologies webpage."*

It is not the project proponent's responsibility to assess each landowner's private water supply (which is not regulated in the state of Pennsylvania) against drinking water standards and to notify them. MSC recommends deleting this item. This is also not a requirement in current statute or regulation.

Design – Water Supplies, Waters of the Commonwealth (Page 31)

In this section the Department proposes, *"Another important aspect of the design phase is for the project proponent to field delineate waters of the Commonwealth, especially at all resource crossings. The following is a list of items DEP recommends.*

a) Streams and wetlands which should be field delineated and confirmed during the 25 Pa. Code Chapter 105 permitting process.

b) Quantitative or qualitative risk analysis.

c) Pre-project and post-project function and value assessment for wetlands as required for 25 Pa. Code Chapter 105 permitting.

d) Sampling parameters for streams and wetlands with significant spills. This should be done during and following trenchless construction. There should be a description of sampling methodology and analysis."

The Department should state that these suggestions are completed as part of the Chapter 105 permits/authorizations and that the Department will review them as part of those application requirements.

Item b - What quantitative or qualitative risk analysis is being referred to here? A risk analysis of what? The Department should define "risk analysis" and provide the corresponding statutory references.

Item c. - Water Obstruction and Encroachment Permit applications do require a description of functions and values of wetlands, but a post-construction assessment is not required by Chapter 105. The post-project function and value assessment for wetlands should be removed.

Item d. - What sampling is being referred to here? Is it sampling the condition of the stream and wetland following a spill should a spill occur? This is confusing and should be clarified.

Permitting (Page 31)

In the first paragraph the Department states, *"Once the Feasibility Analysis has been completed, a project proponent is ready to prepare and submit the appropriate permit applications. Appendix B contains a checklist for project proponents to complete as part of their due diligence. Many of the items on the checklist, and in this guidance document, are equally examined during the preparation of a permit application submittal. The checklist should be submitted with the permit application, while all other items should be available upon request."*

The MSC has several concerns with this paragraph. First, we assume the stated "permit" is a stream and/or wetland crossing permit required under Chapter 105 for a crossing, where a trenchless technology is being proposed. Nowhere in the TGD is the appropriate permitting vehicle specifically stated.

Second, the PA DEP states that the TGD checklist is required to be submitted with the permit application and other items should be made available upon request. If this document is intended to be guidance and hold recommendations only then it is not reasonable to create new permit requirements as part of the application without a formal rulemaking proposal or updating the Chapter 105 regulations and permit application. The MSC recommends that use of this document when proposing a trenchless technology is not a requirement for a permit application.

Section 4. Construction and Compliance (Page 32)

Personnel, Responsibilities, and Trainings (Pages 33-34)

In the second paragraph the Department states, *"Resumes of key personnel containing their experience, planned duties, roles, and responsibilities should be included for each key employee along with training documentation in their site-specific safety training plan. Trenchless technology should include an appropriate inspection and monitoring program, and documentation should be made available upon request. During construction, there should be regular management oversight from both the project proponent and the lead contractor. For proper compliance by all personnel (e.g., drillers and engineers), certain co-lead contractors, sub-contractors, and other contractors may need to be added as co-permittees once the Chapter 102 permits are issued. The project proponent is responsible for verifying the need of adding any co-permittees with all appropriate agencies."*

There is nothing in statute or regulation that requires a project proponent to provide "*Resumes of key personnel containing their experience, planned duties, roles, and responsibilities should be included for each key employee along with training documentation in their site-specific safety*

training plan." Moreover, providing such information is unnecessary, a burdensome administrative task imposed upon the project proponent, and serve no viable purpose. The MSC recommends this requirement be removed from the TGD.

There is nothing in statute or regulation that requires a trenchless technology inspection and monitoring program. It is unclear what documentation the Department expects to be available upon request. The MSC recommends this requirement be removed from the TGD.

Pre-construction Activities (Page 35)

In the third paragraph the Department states, *"DEP expects the project proponent, prior to construction, to identify, as part of its due diligence, all potential impacts as defined in the Site Suitability Analysis and Feasibility Analysis. The project proponent should develop all required plans and incorporate those plans into the scope of the project."*

The MSC interprets this to mean that all documents in the draft TGD are required prior to the start of construction. Unless specifically backed up by statute or regulation items in the guidance document are recommendations only. Second, with this being a recommendation only, then the statement above should remove the word "all" when describing potential impacts identified and be replaced with "reasonably foreseeable". The term "expects" is not appropriate for a TGD and should be replaced with "recommends".

Pre-construction Activities (Pages 35-36)

In the fourth paragraph the Department states, *"Prior to the start of construction, project proponents should integrate site-specific conditions and identified issues in permits, or from licenses, into all site plans. DEP expects project proponents to do their due diligence and incorporate, at a minimum, the following items:*

- *Geology or geophysics*
- *Local land use*
- *Water supply or disposal issues*
- *Critical resources*
- *Soil conditions or constraints"*

The required permits (Chapter 102 or 105) already specify what documentation is required to be on site. There is no need to duplicate or recreate items. The MSC recommends removal of this section.

Drilling Fluid Management (Page 37)

In the first paragraph the Department is urged to provide a Website Link to the approved PA DEP drilling fluid additives.

Drilling Fluid Management (Page 38)

In the sixth paragraph the Department states, *"A list of certified drilling fluid additives with NSF/ANSI Standard 60 (Drinking Water Treatment Chemicals - Health Effects) with a product function of drilling fluid is maintained by NSF on its website at: https://info.nsf.org/Certified/PwsChemicals/Listings.asp?ProductFunction=Drilling+Fluid."*

The link provided in the draft TGD sends the user to a blank page. This paragraph either should be removed or be populated with the corrected link.

Inadvertent Return (IR) Minimization Methodologies – Instrumentation (Page 40)

Recommending monitoring of annular pressure without recommending the comparison of this to anticipated annular pressure may not provide much value. The MSC recommends monitoring of annular pressure should be compared to anticipated annular pressure developed by the engineer.

Appendix A: Trenchless Technology Risk Evaluation (Page 51)

Section A.2 Evaluation of Above-Average Risk (Page 57)

The last sentence of the first paragraph states, *"If, after completing the below checklist, a project proponent does not think their project is above average risk, they should contact the appropriate DEP Regional Waterways and Wetlands Program(s), or DEP's Regional Permit Coordination Office, to discuss and provide justification."*

This provision appears to be pre-mature as a project proponent would not have submitted a required permit application for the crossing at the time of utilizing the recommended checklist. Typically, PA DEP regional offices do not entertain pre-application meetings until the overall project and permit applications have been developed.

Section A.2 Evaluation of Above-Average Risk (Page 57)

The first Checkbox states, *"Will drilling fluids containing substances other than bentonite or plant-based components be used under pressure?"*

Above average risk evaluation does not differentiate conventional bores from methods using fluid under pressure. Trenchless methods that do not employ fluids under pressure should be split from this list. None of the items in the provided checkboxes are a factor if no fluids are utilized under pressure.

Section A.2 Evaluation of Above-Average Risk (Page 57)

The MSC recommends adding an "N/A" checkbox to all lines to be able to better differentiate between fluids under pressure and non-pressurized technologies.

Appendix B: Technical Guidance Document – Plan Submittal Checklists (Page 63

As stated previously there is confusion on when these checklists are to be used, especially since they are recommendations within a guidance document. The MSC presumes that a project proponent could utilize these checklists when proposing a trenchless technology as part of a Chapter 105 stream and/or wetland crossing permit. The Department should be clearer on when and how the recommended checklists may be used and for what permitting vehicle.

Checklists for Trenchless Technology Guidance (Page 63)

In the first paragraph the Department states, *"To avoid costly delays in the permitting and completion of any proposed action, it is strongly recommended that all sections of the Trenchless Technology Guidance are read thoroughly prior to completing the following checklists. The following checklists are considered a companion of the guidance document and should not be completed without proper reference and examination of the guidance document. The checklists should help project proponents confirm their due diligence as recommended in this guidance document."*

The MSC interprets this paragraph to mean that unless the checklists are utilized and completed that PA DEP reviewers will hold up necessary permits for stream and/or wetland crossings. While the Department states that the guidance and checklists are recommended only, we believe that PA DEP permit reviewers will interpret the guidance to be required in order to obtain permit approval. If the Department desires for this to be a requirement they must follow the formal regulatory rulemaking process.

Checklist for Section 2 - Suitability, Feasibility, and Environmental Considerations (Page 63)

The checklist does not differentiate pressurized vs non-pressurized technologies. The MSC recommends that this checklist be split into trenchless - fluid under pressure and non-pressurized. Conventional bores should not be subject to the same considerations as methods using pressurized fluid.

Checklist for Section 3 – Design and Permitting, Design, Failure Mode Contingency Planning (Page 67)

The third checklist item should be changed to *"Every **practical** alternate crossing measure has been documented and considered"*

Checklist for Section 4 – Construction and Compliance (Pages 68 - 71)

The MSC recommends that the Department update the checklist to reflect items that may not be available or known at the time of Chapter 105 permit submittal, such as meeting with EIs and construction staff. To make the checklist usable many of the items should be reflected as "I will" and not "I have".

Conclusion

The MSC appreciates the opportunity to provide these comments. Should you require any clarification or desire to meet and discuss these comments, please do not hesitate to contact me.

Sincerely,

Jim Welty
Vice President, Government Affairs