

**Industry Sponsored Marcellus Shale Application Training
April 16, 20 and 21 2009, Williamsport, Canonsburg and Clarion
Question and Answer Document**

IMPOUNDMENTS

- 1) *Question:* My question is in regards to the line between pits and impoundments. If an operator has already constructed a lined fresh water containment pond which is not large enough to require a permit for fresh water use, but has a depth greater than the 2 feet, allowed under a pit (6 feet)?.

Answer: Generally speaking, a pit (an excavated impoundment) that does not use an embankment or fill material to store fluids will not need a dam permit. If minor fill (less than 2 feet in height at its maximum height, meaning no fluid will ever be contained by the embankment due to the two foot freeboard requirement) is used to anchor a liner for a pit, the Department will not consider the minor fill anchoring the liner to be a dam. This is provided that the height of this liner-anchoring fill does not exceed two feet in height above natural ground.

- 2) *Question:* Can I flow back frac water into this pit as long as I maintain enough free board that the pit has a permitted depth of 0 feet (the water level well below the ground level)?

Answer: Yes, provided the pit (excavated impoundment) does not use an embankment or fill material to store fluids. Once frac water is stored in an impoundment formed by a dam, the facility becomes a regulated dam. Again, if minor fill (less than 2 feet in height at its maximum height - meaning no fluid would ever be contained by the embankment due to the two foot freeboard requirement) is used to anchor a liner for a pit, the Department will not consider the minor fill anchoring the liner to be a dam, provided the height of this liner-anchoring fill does not exceed two feet in height above natural ground.

- 3) *Question:* Has the Department considered adding a new General Permit for the development of Marcellus well sites into the revisions of Chapter 105 - Dam Safety and Encroachments Act? It would reduce the number of individual permit applications for projects with minimal disturbance to the waters of the Commonwealth. It could also be done responsibly so long as minimum impact criteria are established.

Answer: Not at this time, but the Department is/will continue to evaluate ways to improve the permitting process.

- 4) *Question:* Embankment for dam standards indicate that soils should contain 20 percent plus No. 200 material, and nothing larger than a 6 inch maximum size. Given the large amount of native sandstone soils that will not meet this criteria, does having an impervious liner installed make a sandstone rock fill dam acceptable?

Answer: No. Any proposed revisions to the design and construction standards will require submission of the design along with a Dam Permit Application to the Division

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of Dam Safety for review and approval. These revisions cannot be reviewed and approved through the streamlined permitting process that has been developed.

- 5) *Question:* I take the reason for the 20 percent plus No. 200 and 6 inch maximum specification to avoid seepage through the dam. Compaction can be achieved with either material?

Answer: The 20 percent plus No. 200 specification addresses the suitability of the material and the 6 inch maximum particle size addresses the ability to achieve adequate compaction. Acceptable soils for embankment construction and acceptable fill placement and compaction are very clear in the design and construction standards. Any proposed revisions to the design and construction standards will require submission of the design along with a Dam Permit Application to the Division of Dam Safety for review and approval. These revisions cannot be reviewed and approved through the streamlined permitting process that has been developed.

- 6) *Question:* Re: Impoundments. Criteria that soil must contain a minimum of 20 percent plus No. 200 sieve materials. Can soils be blended on site during construction to meet these criteria?

Answer: They would need to be blended well in advance of construction to allow for time to obtain representative samples and to submit them for laboratory soils testing and classification of the blended materials. It would be recommended to test more than three samples if blending soils for construction. The on-site blending operation would be considered part of the impoundment construction, and as such, would need to be included in any applicable Erosion and Sediment Control permit and/or plan.

- 7) *Question:* My question is specific to item No. 5 on page 3 of the impoundment worksheet. What criteria forms the basis of failure? Is it an instantaneous failure of the entire impoundment where the entire contents of the impoundment are discharged? Or, is it a controlled and managed discharge from the impoundment as a result of a defect or impending failure found during routine inspection?

Answer: Assume a pool level at two feet below top-of-dam, a full depth breach, a breach bottom width equal to maximum height of dam, side-slopes of 0.5H:1V, and a breach time of 0.5 hours. More conservative parameters (i.e., water at top-of-dam, wider bottom width, flatter side-slopes and quicker breach time) are also acceptable.

- 8) *Question:* What was the short list of items that can be approved by the Bureau of Oil and Gas Management for dams?

Answer: Frac water storage dams that are located off-stream, are both less than 15 feet in height and 50 acre-feet in storage volume, are not located in floodways, not impacting wetlands and upon failure, will not impact inhabited structures and roadways

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or cause significant property damage; and pits and dams located at a well site and servicing that well site.

- 9) *Question:* Is a pit considered stabilized when the liner is installed?

Answer: No. Permanent stabilization of the site will not be achieved until site restoration has occurred in accordance with 25 *Pa Code* Chapters 102 and 78.

EROSION, SEDEMENT and STORMWATER CONTROL

- 10) *Question:* When using the Erosion Sediment and Stormwater Control (ESS) module combined with the drilling permit application, when can excavation/ construction of the well pad begin? Fourteen days after submitting the ESS module (assuming 14 day approval) or after the drilling permit is issued (45 days)?

Answer: When the ESS module, along with a signed and sealed Erosion & Sediment Control (E&S) plan and Well Site Restoration plan is submitted with the well permit application, the earth disturbance may commence when the well permit is issued, which is typically 45 days. If a signed and sealed E&S plan and Well Site Restoration plan is submitted after the ESS module has been approved as part of the well permit, earth disturbance activities may commence within 14 business days of submitting the required plans. For ESS modules for phased projects, the modules and the signed and sealed E&S plan and Well Site Restoration plans should be submitted at least fourteen days before the commencement of earth disturbance activities, or earlier if other authorizations (ex. Chapter 105) are required. (The module needs to be submitted as part of a Well Permit Application since the well permit is the vehicle for approval of the module. It cannot be submitted after the fact, even for phased projects. The plan can be submitted 14 days prior to earth disturbance for each phase.)

- 11) *Question:* Has the Department considered partnering with county conservation districts to release some more specific guidance, possibly a jurisdictional determination form, to define agency E&S approval responsibilities for oil and gas production versus transmission facilities? There is a big gap between the industry's understanding and the states understanding of these areas which might further delay E&S permitting.

Answer: The Department is continuing to evaluate the permitting process and will consider all suggestions for improvement. Conservation districts currently will process permit applications for interstate and intrastate transmission lines and compressor stations associated with those transmission lines. The Department will process permit applications for production lines, including gathering lines and compressor stations associated with those lines.

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- 12) *Question:* Our company has a permit for 5600+ acres and we are completing minor revisions from this point forward. Question: Our company paid a substantial fee to the conservation district for this E&S review fee. Do we have DEP review these minor revisions, or the Conservation District? Currently we have had only one well pad reviewed and have plans for additional pads and pipelines.

Answer: Any permit application or minor modification that was being reviewed by a conservation district prior to April 1, 2009, will continue to be processed by the conservation district.

After April 1, 2009, all renewals to permits and major or minor modifications to permits originally processed by conservation districts will be processed by the appropriate DEP Regional Oil and Gas Program.

Any construction related to interstate or intrastate transmission lines requiring an Erosion and Sediment Control General Permit-1 (ESCGP-1) will be processed by the conservation district.

- 13) *Question:* If one has to complete the calculation in Section 6 of the Erosion and Sediment Model Plan, how does one determine the volume of stormwater treated and acres treated for each specific Best Management Practice (BMP)?

Answer: Volume is provided through supporting calculations and measurements when required. Supporting calculations and measurements are not required if all the earth disturbance area within the project boundary is permanently revegetated or otherwise stabilized with pervious materials, the approximate original contours are maintained and stormwater management BMPs are used that use natural measures to eliminate pollution, do not require extensive construction efforts, promote pollutant reduction, and are capable of controlling the net increase in the volume and rate of stormwater runoff from a 2 year/24 hour storm event and infiltrates the net increase of the post construction runoff. Supporting calculations and measurements would not be required unless there will be permanent impervious paved surfaces or above-ground structures or facilities excluding well-heads and brine storage tanks and other such ancillary equipment (see model plan for further guidance). Crushed rock or gravel roads are not considered impervious. All other projects must provide supporting stormwater runoff calculations and measurements.

- 14) *Question:* Is there a pre-determined area/amount that a specific BMP will treat?

Answer: Yes. The standard BMPs that have been provided in the ESS Plan have been developed to incorporate specific BMPs and specifications provided in this model plan. BMP construction details and specifications are provided in Appendix A of the model plan. Additional BMPs are listed in the *Erosion and Sediment Pollution*

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Control Manual as well as the *Oil and Gas Operator's Manual*. If an applicant prefers to use any alternative BMPs, they must provide calculations, measurements, and drawings showing the details, specifications and spacing.

Question: Will the Department provide specifics for each specific BMP?

Answer: The specifications for the various BMPs are provided in the E&S Model Plan as well as in the Department guidance documents: *Erosion and Sediment Pollution Control Manual*, No. 363-2134-008, as amended and updated and the Department's *Oil and Gas Operator's Manual*, No. 550-0300-001.

15) Question: Will seeding and placing straw matting be considered acceptable stabilization, without having 70 percent growth?

Answer: Such E&S BMPs should be implemented and maintained as interim or temporary stabilization until the permanent stabilization is established. Under Chapter 102, Erosion and Sediment Control Regulations, for an earth disturbance activity or any stage or phase of an activity to be considered permanently stabilized, the disturbed areas shall be covered with one of the following:

- A minimum uniform 70 percent perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation.
- An acceptable BMP which permanently minimizes accelerated erosion and sedimentation. At a minimum, an acceptable BMP must include the following:
 - The well site must be restored in accordance with Chapter 78 site restoration requirements.
 - The work area around the well and access road is stabilized with an erosion resistant material such as durable crushed rock, aggregate, gravel or other suitable material, and is capable of supporting the weight of the equipment being used.
 - Appropriate BMPs, such as culverts, rock protected outlets, and appropriate erosion resistant linings, are placed in channels, and roadside ditches.
 - The remainder of the disturbed area is stabilized with a minimum of 70 percent perennial vegetative cover with a density capable of resisting accelerated erosion and sedimentation. **Or**, seed and soil amendments are applied and the area is secured with appropriate BMPs such as mulch, erosion control blankets, or seed impregnated erosion control

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mats so that the required vegetation is established the next growing season. **Applying seed and mulch to snow covered areas is not an acceptable BMP. Seeding and mulching alone is not considered permanent stabilization.** Where the vegetation is not compatible with the land use (e.g. cropland) an acceptable BMP that permanently minimizes accelerated erosion and sedimentation must be in place.

- Temporary best management practices, such as mulch, filter fence, straw bale barriers, filter socks or rock filters, are installed and maintained until the minimum 70 percent vegetative cover is established.

17) *Question:* How about stoned surfaces that will not grow vegetation, will this be considered stabilized?

Answer: Yes. Stone, rock, or other similar durable materials are considered an acceptable BMP when it permanently minimizes accelerated erosion and sedimentation.

18) *Question:* How large of a project can be approved using the E&S module submitted with the drilling permit?

Answer: There is no limit on how large a project site can be under the ESS module.

19) *Question:* When is an ESCGP-1 "major" modification required?

Answer: A major modification needs to be obtained when the project site is expanded and/or the addition of a source discharge beyond the area approved in the original permit. Major modifications require a new permit application that meets all procedural ESCGP-1 notice of intent requirements, including E&S and Restoration Plan requirements.

Minor modifications to the E&S Plan and Site Restoration Plan shall be noted on the plan that is available at the site and initialed by the appropriate Department staff. Minor changes to the plan may include adjustments to BMPs and locations within the permitted boundary to improve environmental performance, prevent potential pollution, change in ownership or address, typographical errors and on-site field adjustments such as the addition or deletion of BMPs, or alteration of earth disturbance activities to address unforeseen circumstances.

20) *Question:* I have a previously approved ESCGP-1 application for a pipeline project from a conservation office. The Project exceeds five acres; this is not an intrastate or interstate transmission line project. We have a reroute that's now needed for the project and I need to revise the approved ESCGP-1 application as well as the

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associated E&S plans and narrative. To which agency do I need to submit the revised ESCGP-1 application (PA DEP regional office or the local conservation office)?

Answer: DEP Regional Oil and Gas staff will process permit applications for compressor stations, gathering and production lines associated with well development and with the well exploration activities previously processed by conservation districts.

WATER MANGEMENT

- 21) *Question:* Why don't you ask for approximate time period for use of the water? When you plan to withdraw the water?

Answer: The Department made the determination to utilize the Susquehanna River Basin Commission (SRBC) Passby Flow Guidelines statewide. Within the SRBC Passby Flow Guidelines, the Pennsylvania In-stream Flow Model (PIFM) is used where appropriate. The model allows the user to analyze annual or seasonal habitat loss. The seasons in the model are March to June (spring), July to September (summer) and October to February (Fall/Winter). Even if diminution may be "intermittent," it has the potential to be intense and thus could have a significant impact on stream uses and water quality necessary to protect those uses. By assessing the maximum impact the withdrawal would have if it was continuous, the approval of the source will allow it to be used for more than one facing event or multiple wells and eliminate repetitive permitting.

Because the PIFM was designed to address streams in a certain geological province, the SRBC Passby Flow Guidelines also provide another method – a percent of Average Daily Flow (ADF) – to be applied in other areas when determining an appropriate passby. In the absence of site specific data, we agree that the passby flow values derived from this ADF method are conservative. An applicant may offer alternative methodologies.

- 22) *Question:* Why don't you ask companies to notify you when they are no longer using a source?

Answer: Act 220 and Chapter 110 currently provide a procedure for a withdrawer to file a written notice of termination of a registered withdrawal. (Reference 27 Pa.C.S. 3118(b) (6) and 25 Pa. Code 110.206)

- 23) *Question:* Will the annual reporting (Act 220) of water use lead to fees for water consumption?

Answer: There are no fees associated with the Chapter 110 (Act 220) Registration and Reporting program.

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- 24) *Question:* Since the Department does not ask when the water will be withdrawn, and the water management plan is good for up to five years, will the Department assume that all water withdrawals for a stream will occur at the same time?

Answer: Yes

- 25) *Question:* What is the difference between existing and designated water? How are they used in classifying streams?

Answer: A Designated Water Use is a protected use listed in the state's Water Quality Standards regulation. An Existing Water Use is any water use attained on a water body on or after November 28, 1975. An Existing Water Use may or may not be the same as the Designated Water Use.

- 26) *Question:* Who gets the 48 hour notice call for water withdrawals?

Answer: Such calls should be made to the Regional Office Oil and Gas Program staff associated with the location of the source, i.e. source is located in Bradford County, the call would be to the North Central Regional Office in Williamsport.

WASTEWATER

- 27) *Question:* Will a Residual Waste Transfer Station permit be needed for a tank farm taking wastewater from multiple wells at a site not located on a well site?

Answer: The facility will need an individual transfer station permit if it processes or temporarily stores the wastewater to facilitate its transportation to a processing or disposal facility. The facility may qualify for a general permit for processing and beneficial use if all or some of the wastewater will be beneficially reused.

- 28) *Question:* Will characterization of all analyses be required even after such time that a statistically substantial base line was been established?

Answer: The residual waste regulations (25 Pa Code, Section 287.54) require that the wastewater be chemically and physically characterized. After an initial analysis, the generator may certify on an annual basis (for up to 5 years) that the physical and chemical properties and the process by which the waste was generated have not changed. After that time, an updated chemical analysis will be required. It is anticipated that generators will be able to certify that the chemical analysis has not changed within that 5 year period after a statistically substantial base line has been established for wells within the same geographical area of the State.

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GENERAL

29) *Question:* Was wondering what the DEP considers a well location? The industry is moving in the general direction of well pads with several wells being drilled from the same pad (i.e., same footprint of impacts). Would this well pad be considered a well location?

Answer: Yes.

30) *Question:* Due to the increase of gas well development in Pennsylvania and the importing of gas well operators from other states, will or is it possible, for a West Virginia licensed land surveyor to complete the appropriate forms and plans required by Pennsylvania to obtain a permit to drill a Marcellus gas well. If possible, will you list what forms **cannot** be completed by a licensed West Virginia land surveyor?

Answer: A surveyor licensed in the state of West Virginia can submit a standard notice of Intent for ESCGP-1 coverage. A West Virginia surveyor or other licensed professional would be ineligible for submitting under the expedited processes for either an ESCGP-1 or ESS module under the well permit application, since the professional needs to be licensed in Pennsylvania.